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MONTHLY REPORT

OF

THE AGRICULTURAL DEPARTMENT.

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MONTHLY REPORT.

DEPARTMENT OF AGRICULTURE, *July*, 1866.

In presenting the July report of this department, I am happy in congratulating the country upon the prospect of a year of average fruitfulness. Wheat, the bread crop of the country, was in 1865 less in quantity and in quality than in 1864. Much of the seed used last autumn was of inferior quality, producing plants of low vitality, and the winter following was in most districts variable, freezing and thawing, with little snow and much moisture; and to add to the chances against the life of the plants, the spring was cold, with frequent and severe freezing. This was the case particularly in the Ohio valley, and to some extent throughout the country east of the Mississippi. But the States west of that river promise an unusually abundant crop of superior quality. The fine weather of the later spring and early summer has wonderfully developed the remaining grain of the injured districts. There has been an unusual exemption from ravages of insect tribes; neither rust nor storms have done it material injury; and now, if it escapes sprouting from wet weather, the promise is of a crop nearly as large as last year and far better in quality. The present indications, as marked by our thousands of correspondents, point to an average of about 8½ tenths in quantity, and of a quality that will make it equal in value to last year's crop.

Oats and potatoes were both planted in enlarged breadth, and both promise abundant crops. Oats are particularly heavy.

Pastures are about the average in condition; clover fields a little below.

At least ten per cent. more corn has been planted than usual, and it is generally of fine color, in vigorous growth, but low in altitude for the season.

An extended acreage has been put in potatoes, which average about 10½ tenths in present appearance. Sorghum is reported, on an average throughout the States, at about 9 tenths. Fruits, as will appear from inspection of the tables, are deficient in quantity, especially peaches, which are reported in the principal peach-growing States as follows: New Jersey, 1⅗ tenths; Delaware, 2⅓ tenths; Maryland, 4⅘ tenths; Michigan, 7⅔ tenths; Illinois, 5 tenths; Missouri, 6⅑ tenths.

In the report valuable tables of statistics relative to wool production and consumption, and to exports of agricultural products, will be found, with various other data of resources and production that is worthy of examination and preservation.

ISAAC NEWTON, *Commissioner.*

THE BEST COTTON SECTIONS.—2.

ALABAMA.

The best cotton soils of Alabama are found in a belt extending across the State east and west, including Montgomery, Cahawba, and Selma within its boundaries, and in the alluvial region bordering upon the Alabama and Tombigbee rivers. There is also a considerable aggregate area of fertile land in the course of the streams of northern Alabama. For the greatest production of cotton the counties of this State are named in the following order, giving but ten of the entire list of fifty-two:

Counties.	Acres improved.	Bales of cotton.	Bushels of corn.
Dallas	261,130	63,410	1,352,961
Marengo	244,821	62,428	1,384,616
Montgomery	257,602	58,880	1,586,480
Greene	277,462	57,858	1,311,535
Lowndes	239,667	53,664	1,288,722
Wilcox	179,143	48,749	1,011,359
Perry	194,592	44,603	1,074,257
Barbour	209,150	44,518	909,973
Macon	224,419	41,119	972,723
Russell	230,121	38,728	776,985

In this central belt are some of the finest plantations in the South. The "canebrake lands," very similar in composition and productiveness to what is commonly known in the parlance of the planters as the "rotten limestone" region in Mississippi, (in Hinds and Warren counties,) with a soil remarkable for the state of comminution in which it is found, and underlaid by a soft, yellowish-white limestone of the tenacity of dense chalk, which contains about seventy-five per cent. of carbonate of lime, the superincumbent soil itself holding only a minute proportion of lime, with potash, soda, and magnesia. In a former description of this soil the writer of this said: "Its minuteness of subdivision is extraordinary, with no stones or gravel, and few particles larger than one-fortieth of an inch in diameter, giving an enormous surface of these atoms in proportion to mass or quantity. It is so fine as almost to seem impalpable dust when dry; remains long in solution without deposition; contains, moderately dry, one-third weight of water, and nearly one-sixth when air-dried; in the heats of summer it becomes hard, and in roads polishes with friction, while in the rainy season it is a stiff, plastic mud; its cohesion is twice as great as that of common clays or pine-woods sandy loam; its adhesive power is in still greater excess; it attains a higher temperature and cools more slowly than other soils; water percolates through it less rapidly; its capillary power acts more slowly, but with longer duration, bringing water from greater depths and raising a given quantity to a higher altitude; absorbs aqueous vapor more tardily, but one hundred per cent. more in quantity than clay or light sand, and has an astonishing power of absorbing ammonia, condensing more than fifty times its volume of ammoniacal gas." It is worth while to be thus particular in giving a condensed analysis of its qualities as a guide in the selection of a soil for cotton culture. Such a soil is naturally in a condition of *tilth* that could scarcely be exceeded in common soils with great and expensive labor of the plough, cultivator, and harrow. One valuable peculiarity

possessed by them is their capacity to hold and appropriate the irregular rains of the season, for, equally with heat, the great want of the cotton plant is moisture, though it will not endure stagnant water in the soil.

Alabama had, in 1860, 55,128 plantations and farms, averaging 346 acres, one-third improved, though no less than 696 of them exceeded 1,000 acres each, and 2,016 of them had between 500 and 1,000 acres each. Average price of lands $8 15 per acre.

It is a fact illustrative in the industrial progress of this State, that, in the ten years preceding the eighth and last census, the "farms" increased in numbers 13,164, and that in the same period the increase in average size was 57 acres, and the increase in the quantity of improved land was 1,950,110 acres. The production of cotton increased from 464,429 to 989,955 bales.

The number of slaves was 435,080, averaging eight (nearly) to each plantation or farm.

Bushels of corn, 33,226,282; bushels of wheat, 1,218,444; number of horses, 127,063; of mules, 111,687; of oxen, 88,316.

The average value of agricultural implements to each farm, $131.

LOUISIANA.

Louisiana is very rich, but with a diversity of character and divided interests. Much of the portion east of the Mississippi is pine barrens; much of the southern is splashed with lakes and lagoons and covered with marshes; the most accessible arable lands are appropriated to cane-growing, leaving the bottoms of the northern and north-western section for cotton-growing. And it is here, Tensas parish, for instance, opposite Grand Gulf, where the greatest results, the largest number of bales in proportion to the amount of improved land in farms is obtained of all the cotton-yielding lands of the United States, with the exception of San Augustine county, in Texas. Claiming only 117,355 acres of improved or "cleared" land, the parish produced 141,493 bales of cotton, while a sufficient proportion was occupied by corn to produce 579,650 bushels; and other crops, buildings, farm yards, and unoccupied patches encroached still further upon the cotton fields, which must have achieved an average between one and a half and two bales per acre.

The following stand first in the list of parishes for quantity of cotton:

	Acres imp.	Bales cotton.	Bushels corn.
Tensas	117, 358	141, 493	579, 650
Carroll	118, 116	84, 165	556, 081
Concordia	87, 406	62, 971	502, 340
Rapides	108, 839	49, 168	820, 378
Madison	104, 383	44, 870	899, 040
Bossier	91, 583	40, 028	552, 824
Nachitoches	80, 616	36, 887	459, 978
Point Coupee	82, 932	28, 947	507, 510

The size of plantations increased in the last decade from 372 to 536 acres. The average of improved land was increased fifty per cent., and of unimproved one hundred per cent., and the number of farms grew from 13,422 to 17,328. The average valuation is the highest of any of the Gulf States—$22 per acre; and that of implements and machinery is excessive, averaging $1,076—a fact due to the expense of the machinery employed in the sugar manufacture. The State comprises an area of nearly thirty millions of acres, of which less than a third is in farms. A large portion of the State is yet public domain, with no inconsiderable portion of water.

INSECTS INJURIOUS TO COTTON PLANTS.—2.

One of the insects most destructive to the cotton plant is the so-called boll-worm, (*Heliothis armigera,*) the caterpillar of which, when young, destroys the flower-buds and young bolls, but when older pierces the half or full-grown boll, where it devours the whole of the interior part, consisting of the unripe seeds and yet unformed cotton, leaving the outside of the boll uninjured, excepting where the worm has effected an entrance by gnawing a round hole, which is frequently stopped up by the digested portions of the food of the enclosed caterpillar.

The habits of this insect are as follows: The egg is generally deposited singly on the outside of the involucel or outer calyx of the flower or young boll, where it adheres by means of a gummy substance which surrounds the egg when first laid, and which hardens by exposure to the atmosphere. It has been repeatedly stated by planters that the egg was deposited upon the stem, and that the young stem forms the first food of the newly-hatched caterpillar; but after a careful examination of several hundred stems, I found only one egg placed in this situation, and that, from the fact of its being laid upon its side, instead of the base, had evidently been misplaced. The egg is deposited about twilight, and is of a somewhat truncate, oval shape, rather flattened at the top and bottom, and is grooved with projecting ridges on its side, which meet at the top and bottom in one common centre; its color is yellowish or pale straw color until nearly hatched, when it becomes much darker, as the young caterpillar, which is inside, appears plainly through the translucent shell. These eggs may readily be distinguished from the eggs of the cotton caterpillar or cotton army-worm, for which they have frequently been mistaken, by their oval, truncate form and yellow color, while those of the cotton army-worm are very much flattened, and of a beautiful green color, scarcely to be distinguished from the leaf upon which they have been deposited. A single female boll-worm moth, dissected by Dr. John Gamble, contained upwards of five hundred eggs, so that it is no wonder they increase so rapidly. At the commencement of the season only a few moths may be seen flying about in the morning or evening twilight; yet these seemingly harmless moths are the parents of the second and third generations which spread such devastation throughout the cotton fields.

Some eggs of the boll-worm moth hatched in three or four days after being brought in from the field, the enclosed worms gnawing a hole through the shell of the egg and then escaping. They soon commenced feeding upon the tender fleshy substance of the calyx, near the place where the egg had been deposited. When they had gained strength, some of the boll-worms pierced through the calyx, and others through the petals of the closed flower-bud, or even penetrated into the young and tender boll itself. The pistils and stamens of the open flower are frequently found to be distorted and injured without any apparent cause. This has been done by the young boll-worm; when hidden in the unopened bud, it has eaten one side only of the pistil and stamens, so that when the flower is open the parts injured are distorted and maimed, and very

frequently the flower falls without forming any boll whatever. In many cases, however, the young worm bores through the bottom of the flower into the immature boll before the old flower falls, thus leaving the boll and involucel or envelope still adhering to the foot stalk, with the worm safely lodged in the growing boll. The number of buds destroyed by this worm is very great, as they fall off when quite small, and are scarcely observed as they lie brown and withering on the ground beneath the plant. The instinct of the boll-worm, however, teaches it to forsake a bud or boll about to fall, and either to seek another healthy boll or to fasten itself to a leaf, on which it remains until it has shed its skin, when it attacks another boll in a similar manner, until at length it acquires size and strength sufficient to enable it to bore into the nearly-matured bolls, the interior of which are entirely destroyed by its attacks, as, should it not be completely devoured, rain penetrates through the hole made by the worm, and the cotton soon becomes rotten and will not ripen. These rotted bolls serve also as food or shelter for numerous small insects, which will be mentioned afterwards. One thing is worthy of observation; and that is, whenever a young boll or bud is seen with the involucre or outer calyx (by some called the "ruffle") spread open and of a sickly yellow color, it may safely be concluded that it has been attacked by the boll-worm, and will soon perish and fall to the ground. When the bolls are older they remain adhering to the plant. If many of these fallen "forms" or buds lying on the ground are closely examined, the greater portion of them will be found to have been previously pierced by the boll-worm; some few exceptions, however, may have been caused by minute punctures of plant-bugs, by rains, or adverse atmospheric influences.

The buds injured by the worm may readily be distinguished by a minute hole where it has entered, and which, when cut open, will be found partially filled with small black grains, something like coarse gunpowder, which is nothing but the digested food after having passed through the body of the young worm. The boll-worm when very young is able to suspend itself by a silken thread if blown by the wind or accidently brushed from the boll or leaf on which it rested. After changing or shedding its skin several times and attaining its full size, the caterpillar descends from the plant and burrows into the earth, where it makes a cocoon of gravel and earth interwoven or cemented together with a gummy silk which issues from its mouth. In this earthen cocoon it changes into the chrysalis state.

Worms which entered the ground in the month of September and October appeared as perfect moths in about one month; but when they descend into the ground later in the season the chrysalides will remain all winter and appear as perfect moths the following spring.

A boll-worm which was bred from an egg found upon the involucel, "or ruffle," of a flower bud, grew to rather more than the twentieth of an inch in length by the third day, when it shed its skin, having eaten in the mean time nothing but the parenchyma, or tender fleshy substance from the outside of the calyx. On the fifth day it pierced through the outer calyx and commenced feeding inside. On the sixth day it again shed its skin, and had increased to about the tenth of an inch in length. On the tenth day it again shed its skin, ate the interior of the young flower bud, and had grown much larger. On the fourteenth day, for the fourth time it shed its skin, attacked and ate into a young boll, and had increased to thirteen twentieths of an inch in length. From this time it ate nothing but the inside of the boll; and on the twentieth day the skin was again shed, and it had grown to the length of an inch and one-tenth, but, unfortunately, died before completing its final change.

These moths probably deposit their eggs on some other plants when cotton is inaccessible. A young boll-worm was found in the corolla of the flower of a squash devouring the pistil and stamens; and as there is a striking similarity be-

tween the boll-worm and corn-worm moth, and their appearance and habits in both caterpillar and chrysalis state are the same, it will, perhaps, prove that the boll-worm may be the caterpillar of the corn-worm moth, and that the eggs are deposited on the young boll as the nearest substitute for unripe corn, and only placed upon cotton when corn has become too hard and old to serve as their food. Colonel B. A. Sorsby, of Columbus, Georgia, has bred both these insects, and pronounces them to be the same, and states, moreover, in support of this theory, that when, according to his advice, the corn was carefully wormed on two or three plantations, the boll-worms did not make their appearance that season on the cotton, notwithstanding that on neighboring plantations they committed great ravages. For the sake of proving this fact I have frequently taken the worms from unripe ears of corn and fed them entirely on cotton bolls, as also the worms from cotton and fed them on corn, and in no case did the change of diet appear to affect the health of the caterpillars in the least, as they went through all their transformations in exactly the same manner, and when the perfect moths made their appearance they could not be distinguished from each other, although I may here observe, that even from the same brood of caterpillars the perfect moths vary considerably in size, color, and markings. The worms, or caterpillars, have six pectoral, eight ventral, and two anal feet, and creep along with a gradual motion quite unlike the looping gait of the true cotton caterpillar; they vary in color and markings, some of them being brown, while others are almost green, with all the intermediate shades. The brown caterpillars generally have a longitudinal yellow band or stripe on each side, and several longitudinal stripes of a darker brown on the back, while the green have a greenish-yellow longitudinal stripe along each side, and are also striped on the back; all are more or less spotted with black, and slightly clothed with short hairs, arising from each wart or black spot. These variations of color are not easily accounted for, as several caterpillars changed color without any apparent cause, being fed upon the same food and in the same box as the others. Several planters assert that in the earlier part of the season the green worms are found in the greatest number, while the dark brown variety are seen later in the autumn, as we know is also the case with the caterpillars of the cotton army-worm.

The upper wings of the moth are of a yellowish clay color, in some of the specimens having a tinge of olive green, but in others of rusty red. There is an irregular dark band running across the wings about the eighth of an inch from the margin, and a crescent-shaped dark spot near the centre; several dark spots, each enclosing a white mark, are also in the broad cross-bands; the under wings are lighter colored, with a broad black border on the margin, and are also distinctly veined with the same color. Near the middle of this black border there is a light yellow clay-colored spot of the same as the rest of the under wings, which is much more distinct in some specimens than in others, but may always be plainly perceived; there is also, in most specimens, a black mark or line in the middle of the under wing; in some specimens, however, it is very indistinct. These moths multiply very rapidly, for, as I have before observed, one female moth may contain at least five hundred eggs, which, if hatched in safety, would rapidly infest a whole plantation, three generations at least being produced in Georgia in the course of one year.

In an interesting communication from Colonel Benjamin F. Whitner, of Tallahassee, Florida, he states that the boll-worm was scarcely known in his neighborhood before the year 1841, and yet in the short period of fourteen years it had multiplied to such an extent as to become one of the greatest enemies to the cotton on several plantations in that vicinity.

Many planters have recommended fires to be lighted in various parts of the plantations at the season when the first moths of this insect make their appearance, as they are attracted by light and perish in great numbers in the flames; and if most of the first brood of females be thus destroyed, their numbers would

necessarily be reduced, as it is the second and third generations which do the principal damage to the crop.

Some successful experiments in killing these moths with molasses and vinegar were made by Captain Sorsby, which I will describe in his own words:

"We procured eighteen common-sized dinner plates, into each of which we put half a gill of vinegar and molasses, previously prepared in the proportion of four parts of the former to one of the latter. These plates were set on small stakes or poles driven into the ground in the cotten field, one to about each three acres, and reaching a little above the cotton plant, with a six-inch square board tacked on the top to receive the plate. These arrangements were made in the evening soon after the flies had made their appearance; the next morning we found eighteen to thirty-five moths to each plate. The experiment was continued for five or six days, distributing the plates over the entire field; each day's success increasing, until the numbers were reduced to two or three moths to each plate, when it was abandoned as being no longer worthy of the trouble. The crop that year was but very little injured by the boll-worm. The flies were caught in their eagerness to feed upon the mixture by alighting into it and being unable to escape. They were probably attracted by the odor of the preparation, the vinegar probably being an important agent in the matter. As the flies feed only at night, the plates should be visited late every evening, the insects taken out, and the vessels replenished as circumstances may require. I have tried the experiments with results equally satisfactory, and shall continue it until a better one is adopted."

As it appears that the moth is attracted by and feeds with avidity upon molasses and vinegar, could not some tasteless and effective poison be mixed with this liquid, so that all the early moths which might partake of it would be destroyed before depositing their eggs, somewhat in the same manner as has been already practiced with great success in the destruction of the tobacco fly? Insectivorous birds also serve as very useful agents in the diminution of the boll-worm and other insects, and should be protected. In proof of this fact, I will state that I have seen a king-bird, or bee-martin, chase and capture a boll-worm moth not ten paces from where I stood, and which I was in pursuit of at the same time; also, that some young mocking-birds, kept in their nest near an open window, were fed daily by their parents with insects, among which were quantities of the boll-worm moth, as was proved by the ground underneath being strewed with their dissevered wings.

THE FLAX APPROPRIATION.

The flax commission having been dissolved some months ago, the Commissioner of Agriculture has transferred the balance of the appropriation, $10,500, or more than half of the total sum originally placed in his hands, to the treasury of the United States. In presenting an official notice of this fact to the Senate, Senator Anthony used the following language:

"It will be recollected that three years ago an appropriation of $20,000 was made to test the practicability of cultivating and preparing hemp or flax as a substitute for cotton, under the direction of the Commissioner of Agriculture. This fund has been administered by the Commissioner of Agriculture with very great economy, and with very good results. Although the process of cottonizing flax, or reducing flax to such a condition that it may be spun upon cotton machinery, has not been attained, and, perhaps, from the nature of the fibre, may never be attained—that is a question yet to be settled—very great improvements have been made in the use of flax. It has been applied to many different articles in which before it was unknown. In some it is equal to cotton.

In some it is superior to cotton. In some it is inferior to cotton. But, from its greater cheapness, it produces a very valuable fabric. The Commissioner of Agriculture states that of the fund of $20,000 he has transferred back $10,500 to the surplus fund of the treasury; and in these days, when there is a deficiency bill for everything, I thought that so economical an administration was deserving of honorable mention."

TREES IN THE PRAIRIES.

In growing trees upon the western plains peculiar difficulties are encountered, and will doubtless be surmounted, as they have been in Illinois and other prairie regions, in a satisfactory degree. One of these drawbacks is found in the mild and moist climate of autumn and great fertility of soil, which continue growth until the near approach of winter. A correspondent in Otoe county, Nebraska, gives an instance of this kind: "I have to report unfavorably in regard to fruit. There are some young orchards started which have been in bearing a few years. Last season was warm, wet, and growing, up to the last of October. Trees made a rapid growth, and the wood being immature, a sudden freeze in November killed vast numbers of them, as well as many young forest trees that had been started on the prairie for belts and screens. We do not call them winter-killed, for they were killed in autumn. The same thing happened to a more limited extent in the autumn of 1863. Some are discouraged in attempting to raise fruit here; others are of opinion that hardy, slow-growing varieties will succeed, and advocate the seeding of the land to grass in order to check the growth of the tree."

BOATING TO NEW ORLEANS.

The amphibious character of the agriculture of the Ohio river districts in former days is referred to by a southern Indiana correspondent. Tempting as New Orleans prices sometimes were, it is doubtful if alternate experiences, as farmers and boatmen, in the average of cases, proved permanently profitable. Labor on the farm and on the flatboat often proved as incongruous as dissimilar. One tended to stability and steadiness, the other to roving and recklessness. It seems that this singular industrial copartnership exists in some localities yet. The products of the farm are shipped in the autumn, and the boys are kept from school all winter and subjected to unwholesome influences of the river and the city, and the farm business of the winter is entirely neglected. This course, followed for fifty years, is represented as reducing the yield of corn in some cases from seventy-five to ten bushels per acre.

CASTOR OIL BEAN.

In southern Illinois and in Missouri the castor oil bean—*Ricinus communis*—has been cultivated in certain localities with a good degree of success. St. Louis is the market. A casual correspondent, writing from St. Joseph, says that this culture, like that of hemp, has been greatly interfered with during the war by the loss of the slave population and the necessity of providing food products. He says:

"But the prices now offered by manufacturers in St. Louis, viz., $3 50 to $4 per bushel, will no doubt increase its cultivation in the future.

"In this climate we have grown the following varieties of the castor oil bean: *Ricinus communis*, growing four feet high, and ripening earliest of all. *R. Spectabilis*, five feet, with dark-green fruit and leaves. *R. Sanguineus*, fruit red and in large clusters, stalks and leaves dark red; grows seven feet high. *R. Lividus*, stems brilliant red, and fruit lively green; grows five feet high. *Leucocarpus*, a dwarf variety, growing three feet high, with white fruit. This is an African variety, and we have found it the most prolific. *R. Braziliensis*, with a brownish yellow fruit, growing five feet high.

"We should much like to have experiments made with the different varieties, and reported in the monthly report."

THE PRESERVATION OF WOOD.

A correspondent at Charlestown, West Virginia, gives the results of experiments made some years since while in charge of the working force of one of the railway companies in England:

A cylindrical iron vessel, made of strong boiler plates 30 feet long by 2½ feet in diameter, was fitted with safety valve and door (faced) at one end. After putting in all the timber possible, it was filled with the preserving liquid, and a pressure of 120 pounds to the square inch applied by a hydraulic pump. The wood was allowed to remain under pressure for one hour to insure the penetration of the liquor. The preserving solutions successively used were corrosive sublimate, arsenic, sugar of lead, sulphate of copper, and common salt. Pieces of wood 3 by 3 inches and 2 feet long, each saturated by the above process with one of these ingredients, were driven one foot into the ground under the eaves of a large building. Other pieces were placed in a jack wall, covered up, where timber rotted badly. In each case they were accompanied by pieces of like dimensions unprepared. Six years after, upon examination, those under the eaves were less affected than those in the wall. All were in better condition than the unprepared. They ranged thus:

Corrosive sublimate, and arsenic, best—little choice between them; sulphate of copper, next best; sugar of lead, next; common salt, poorest.

The unprepared was in a state of decay.

INSECTS.

If correspondents, in noting depredations of insects in their localities, will be careful to name them correctly and give clear and accurate descriptions, their notes will prove more valuable and available. It would be still better to send specimens safely secured in boxes or otherwise, to insure their safe arrival. They will come free of postage, and our entomologist would be able to identify the specimens and give their true names. In consequence of the very limited dissemination of entomological knowledge among the masses, the greatest confusion exists as to names and characters of common insects, which such a plan as this would do much towards remedying, and prove highly interesting and very beneficial to agricultural communities.

The following are some of the entomological notes in our correspondence of the present month:

Sarpy county, Nebraska.—The tent caterpillar is not so numerous as for the last three years. Potato bugs (*Doryphora 10 lineata*, or 10-striped spearman) appearing—a soft, red, filthy-looking bug when growing; hard-shelled, striped when grown; a little oval and about one-third inch in diameter. Remedy—knock

them off and scald, burn, or soap them. Worse on white neshannocks than on others.

Denton county, Maryland.—Wheat is attacked by the fly and joint-worm.

Newcastle county, Delaware.—The wheat is taken almost wholesale by the fly when the use of phosphates is omitted, even though the ground is otherwise good.

Centre county, Pennsylvania.—The caterpillar (probably *Clisiocampa Americana* of Harris) has been very destructive to fruit trees.

Suffolk county, Massachusetts.—No apples on account of the canker-worm.

Adams county, Ohio.—The Hessian fly had commenced its ravages on wheat May 30.

Wells county, Indiana.—Wheat is injured by a small worm.

Lehigh county, Pennsylvania.—Legions of caterpillars (probably *Clisiocampa Americana)* made their appearance this season, devouring leaves and blossoms upon some trees entirely. It is feared these trees will not survive.

Door county, Wisconsin.—No turnip seed. The grasshopper cut off our entire crop, seeds and all, last year.

Perry county, Pennsylvania.—Peach trees on the decline. They grow and begin to bear, then dry away and die. The worms (*Trochilium* or *Ægeria exitiosa*) kill many of them, but some die without and we can discover no cause.

Kent county, Maryland.—Wheat much ravaged by the midge, or Hessian fly.

Van Buren county, Michigan.—Wheat on the opening lands seems to be affected with the Hessian fly—looks yellow at the roots.

In Wisconsin the cut-worm and grasshopper have been troublesome.

CONDITION OF SHEEP.

In many localities sheep are reported as having wintered in fine condition, and fleeces as being heavier than last year. Some exceptions are noted.

On the 17th and 18th of June, a heavy rain storm swept over the central portions of the country. It was especially severe in northern Ohio, and ruinous losses resulted among the newly-shorn flocks. Thousands are reported in single counties. Our data being from voluntary correspondence, not general in its range or systematic in detail, it is useless to attempt an enumeration of the sheep destroyed. The loss, however, was very heavy, and not confined to the weak in constitution or poor in flesh. Some of the finest sheep perished as suddenly as the poorest.

The following are some of the cases of loss in wintering:

Holmes county, Ohio.—"The wet weather of last year appeared to make our pasture of a watery nature, which had a bad effect upon the health of sheep numbers of them being diseased with a watery swelling under the jaws and throat, from which some died in the fall, and some in the winter. Those surviving appear to be now nearly recovered."

Marion county, Ohio.—"Those who fed corn to their sheep through the winter brought them through in good condition. Smaller lots, fed on hay only, fared badly. A large number of lambs were lost during the cold storms of April—enough to build sheds for all the ewes in the county."

Steuben county, Iowa.—"The poor condition of sheep and the loss by death appear to have been owing to the inferior quality of the hay, caused by the very wet season of 1865."

Jefferson county, Iowa.—"The winter and spring have been unusually hard upon sheep, and a great many have died, although well housed and cared for."

Lawrence county, Pennsylvania.—"In travelling through the county a great

many flocks of coarse-wooled sheep were seen, shorn of their wool by a disease called the 'scab,' resulting, possibly, from being badly wintered. Fine-wooled sheep are in fine condition."

In some localities it is stated that the sheep were in poor condition in consequence of the poor quality of last year's hay. In one case "more than half the lambs died, the ewes not giving sufficient milk."

Appanoose county, Iowa.—"Owing to the extreme scarcity and high price of feed last year, the sheep were very poor, and large numbers died of want. This year they are nearly all in excellent condition. Large numbers of stock sheep, are fat enough for mutton, and consequently the crop of wool per head will be greatly in excess of 1865."

Decatur county, Iowa.—"Wool being low, many sheep died from want of attention."

At New Ulm, Minnesota, "sheep were lost for want of shelter and good hay."

CASUAL NOTES.

"*Mast.*"—A correspondent in Braxton, the central county of West Virginia, says there was a very abundant crop of acorns last year, so that the hogs came in very fat, and the quality of the meat was good; and the report is that there is a good prospect for another crop of acorns.

Seed wheat distribution.—Farmers in many localities have acknowledged that their best and earliest wheat is from seed distributed by the Department of Agriculture during the past four years. Some have written of sales of considerable quantities of it at $3 50 to $4 per bushel. In some localities the Tappahannock variety has met with excellent success. A correspondent at Superior City, on Lake Superior, writes: "The seed wheat sent by the Commissioner is working well, and is all the wheat that is now growing at the head of the lake."

Late frosts.—In Greene county, Indiana, a frost on the 29th of June is reported—the latest in forty years. The corn was frosted, but recovered from the shock.

Immigration.—A heavy immigration into Kansas from other States is reported. The crops were probably never excelled in that State in luxuriance and promise of plenty, a fact which constitutes another of the magnets which are drawing population in that direction.

Imports of sheep and lambs into Great Britain.—The great demand for sheep and lambs for food, at the present time, is shown by the following statement of imports: In May, 1866, 79,481 head; in May, 1865, 63,284; in May, 1864, 32,816. In the five months ending May 31, total imports of sheep and lambs were 324,273 head; in the corresponding period of 1865, 159,418 head; in 1864, 91,194.

Australian wool.—In 1855 the Australian settlements sent to Great Britain 49,142,306 pounds of wool. In 1865 the total had risen to 109,734,261 pounds.

Imports of onions into Great Britain.—Holland sent 290,812 bushels; Belgium 115,413 bushels; France 106,663 bushels; Portugal 102,969 bushels; and various other countries 13,821 bushels. The total actual value being set down at 490,973 bushels; the average prices varying from 5*s.* 11*d.* to 17*s.* 10*d.* per bushel; the former having reference to the produce of Portugal, the latter to that of Belgium.

A statement showing the total value of live stock in the following States for the years 1860, 1865, *and* 1866.

	1860.	January, 1865.	February, 1866.
Maine	$15,437,533	$21,539,128	$23,721,811
New Hampshire	10,924,627	13,560,612	13,862,622
Vermont	16,241,989	24,905,952	27,473,732
Massachusetts	12,737,744	17,638,783	18,263,194
Rhode Island	2,042,044	2,675,029	3,375,917
Connecticut	11,311,079	13,844,574	17,200,930
New York	103,856,296	148,536,690	170,552,506
New Jersey	16,134,693	22,415,429	27,055,185
Pennsylvania	69,672,726	105,862,161	123,847,743
Maryland	14,667,853	19,139,655	20,161,813
Delaware	3,144,706	3,545,607	4,469,869
Kentucky	61,868,237	56,729,634	60,348,250
Ohio	80,384,819	126,979,891	141,215,182
Michigan	23,714,771	47,311,803	52,091,122
Indiana	41,855,539	82,543,704	88,657,071
Illinois	72,501,225	116,588,288	115,459,232
Missouri	53,693,673	44,431,766	49,016,699
Wisconsin	17,807,375	36,911,165	47,635,107
Iowa	22,476,293	66,572,496	71,946,682
Minnesota	3,642,841	8,860,015	12,671,207
Kansas	3,332,450	7,324,659	9,127,306
Nebraska Territory	1,128,771	3,216,312	3,841,164
Total	658,577,284	991,133,353	1,101,994,344

CONDITION OF THE CROPS.

Wheat.—The prospect at the date of the last report was for about three-fourths of a crop. Later returns uniformly favor a higher estimate. Nowhere are material injuries reported from rust, insects, or storms; day by day improvement has been noted in the tillering shoots, in the length and development of the heads, and in the size and weight of the berries.

Spring wheat has been reported in fine condition throughout the country, falling below an average only in Pennsylvania, West Virginia, and Ohio. In half the States it is above the average; and in Missouri, Wisconsin, Kansas, and Nebraska, showing from one to three tenths more than an average.

In view of the poor quality of last year's wheat, and the superior excellence of the present crop, it is reasonable to expect as large a supply of bread as last year, and of better quality.

As was expected, the gloom embodied in the lamentations that greeted the straggling stalks of wheat, as they struggled upwards in early spring, was measurably dispelled under the influence of fine weather in the closing days of May and in the month of June. It was expected for several reasons. There is a natural tendency to a little exaggeration in expressing one's disappointment in such a case. It sometimes happens that farmers seed too heavily in rich soil. These stalks with ample "elbow-room" grew stout and heavy; their roots had abundant nourishment, and a vigorous tillering commenced. This is another of the ways in which it is shown how "nature abhors a vacuum" and seeks to fill it. Alderman Mechi, in England, has carried experiments in their seeding to a degree that would prove a ruinous excess in this country, especially with our careless culture, though he claims fifty bushels of wheat per acre from a half peck of seed. But our correspondents report, concerning these straggling stalks,

that they reverse the national motto, *E Pluribus Unum*, and produce *many* from one, and the berries are heavier, the heads longer, and the farmers are happily disappointed in the harvesting.

In Indiana county, Pennsylvania, it is said, "The backward season makes harvest ten days later than usual, and gives the weevil a chance to work upon it."

Deterioration of seed.—A correspondent in Washington county, Maryland, referring to the enemies of wheat in his region, adds: "In addition to these enemies, a formidable difficulty arises from the repeated use for a series of years of the same variety of seed on the same soil, in the same locality. Each variety of wheat seems to do well here for a series of eight or ten years, then it seems to languish and become more liable to injury from the Hessian fly, the rust, or smut, &c. Whether the declension in the crop is attributable to the fact that each variety of wheat exhausts so much of some particular constituent of the soil that it can no longer flourish as at first, or whether the wheat deteriorates from neglect, inattention, or mismanagement of the farmer, I am unable to determine. Prior to 1836 our farmers had used varieties which failed totally that year to made a remunerative yield. Soon after, some wheat was imported from the Mediterranean, which for some ten to twenty years was cultivated here almost exclusively. In 1858 the crop failed almost entirely. The Lancaster wheat was then introduced, and has been successfully cultivated ever since. This year the 'Lancaster' has suffered much from 'fly;' some also from rust. At seed time last fall we had a dry spell, so that wheat came up badly. That which was sown first and came up well was damaged by 'fly;' the later sown was injured by rust. We estimate our crop this year to be about a half crop; the quality of that which ripened early is good; the later wheat was injured by rust."

Early wheat.—Many correspondents call attention to the necessity for seed wheat that matures early, and thus escapes rust and the ravages of insects. One in Indiana deems it essential to success in wheat-growing. Everywhere it is acknowledged to be a great desideratum. Tens of millions of dollars might be saved to the country by the dissemination of a species ripening reliably ten days earlier than the average. May it not be attained on the principle of selection, by which improvement in species is effected both in vegetable and animal life? Who will essay the improvement?

Injuries.—Some farmers maintain that wheat was killed by a heavy sleet in midwinter, continuing five weeks, while others say that it was alive after that date, but was killed by cold, dry weather in March.

In some parts of Kentucky the injury is attributed to excessive and sudden rains, and severe cold weather, and sudden freezing after heavy rains.

In Missouri injuries by the fly are reported.

The only injuries noticed in Kansas have resulted from the overflow of valleys by heavy rains, in some localities doing essential damage.

From Harrison county, Indiana, comes a statement that there was less than an inch of snow during the entire season. There was much rain instead.

A correspondent in Johnson county, Indiana, attributes the failure of winter wheat, in connexion with this lack of snow and excess of moisture, to the bad seed. The wheat of last year was generally poor, in some localities notoriously so; it did not make good bread, and it could not be expected to possess sufficient vitality to produce a vigorous growth capable of resisting the effects of alternate freezing and thawing.

On the eastern shore of Maryland, a correspondent reports that the crop "was injured by hard freezing when wet in winter, and by a dry, cold March."

In Newcastle county, Delaware, the winter wheat suffered severely through the winter by freezing and thawing, but the spring months have been unusually

favorable for that grain, and it has recovered wonderfully, especially where the use of phosphates was resorted to.

In Warren county, in northwestern Pennsylvania, it is reported: "Although the winter was cold, with but little snow, I never saw winter wheat come out better." Among these highlands, the uniform cold of the season protected wheat from the calamities endured in the milder and more fickle climate of Indiana and other western States.

Correspondents in the west refer to the extraordinary vicissitudes of climate, not only during the past winter, but through the spring up to the time of harvesting. In some localities it was claimed that the injury was done in the spring by rough, cold, variable weather, which continued during April and May, leaving the grain crop in a backward, unpromising condition, when June came in with beautiful "growing weather," and all that was lost was rapidly regained, and "wheat was harvested in splendid order, and will prove a full crop."

Statements of this character come from all sections. Thus the burden of our recent reports is a universal verdict, "better than we expected."

Quality.—The testimony from all quarters renders it certain that the quality will be excellent. An extract or two will show its general character. In Jersey county, Illinois, "the grain is unusually fine and large, and will compare favorably with the grain of 1864." A correspondent in a blighted district, who calculates upon a half crop in his county, acknowledges that its quality is superior, and admits that there will be a sufficiency for seed and bread for the home population, with ordinary prices, but that, under the stimulus of extra high prices, there will be some to send abroad. This superior excellence will not only go far to make up the difference in quantity between the crop of this year and that of 1865, (which difference is far less than was expected on the first of June,) but it will, it is believed, make even more good bread and prove of greater value than the crop of last year. Besides, there has been a saving in consumption, which will help to swell the prospective supply. The poor quality of last year's wheat, and the high price of flour, in connexion with the superior quality of last year's corn, has had its legitimate effect in causing a largely increased use of corn bread, which has been for three years past in certain districts almost entirely unknown, wheat having been actually cheaper than corn.

Winter barley.—This crop is in very nearly the same condition as the wheat. Taken together, the average of the fall-sown will reach nearly nine-tenths, and the spring-sown exceeds an average by nearly a tenth.

Oats.—This crop has been unusually good, almost beyond precedent. In no State will there be less than an average crop, and in one at least, (Kansas,) the returns give promise of twenty-five per cent. more than an average. Rarely is the country, in its length and breadth, blessed with a crop so uniformly liberal in its yield, and so excellent in quality. A remarkable exemption from disease is apparent, though a correspondent in Greene county, Kentucky, writes of "an ordinary crop, quite low, with occasionally an appearance of rust." But notes like this are rather the rule the present season: "During a residence in this county, (Randolph, Indiana,) I have never seen a better prospect for oats, flax and corn."

Pasture and clover.—The condition of pastures is generally above the average. Kansas and Nebraska are more than two tenths above; Minnesota, Iowa, and Missouri, from one to two tenths above; Michigan and Wisconsin, between ten and eleven tenths; Vermont, Rhode Island, New York, and Ohio, an average; the other States slightly below.

Clover suffered by winter-killing, except in the trans-Mississippi States. The loss varies from one to four tenths, as will be disclosed by an examination of the tables. A correspondent from Outagamie county, Wisconsin, says: "The small white clover, our greatest dependence for milch cows, is entirely gone. The month of May was the dryest and coldest ever known."

Corn.—With the exception of Maine and New Hampshire, every State reports a greater breadth of corn than usual. Ohio, Indiana, Illinois, Minnesota, Kansas, and West Virginia have each increased their average about ten per cent. Iowa has nearly as great an increase. In several of the States the condition of the crop is an average. In most of them, however, as the tables indicate, the cool weather of the spring gave the crop a bad start, from which it had not fully recovered up to the first week in July. It is generally reported low in altitude owing to the cold spring, but in vigorous condition, and of a deep green color. There is yet ample time, with favorable conditions, to make a productive yield of fine quality, in which case the extra breadth planted would give a very large crop. It is too early in the season to arrive at definite estimates.

Sorghum.—A somewhat diminished acreage of sorghum is indicated. Little is grown in the eastern States, but that little is increased this season. A material increase in New York is shown, but New Jersey and Maryland report a slight decrease. The sorghum-growing States, Indiana and Illinois, show a considerable diminution; so also do Wisconsin and Minnesota. The season thus far has not been very propitious for sorghum, and the reports represent the average condition about one-tenth below the standard of ordinary excellence. Some portions of the State of Kentucky are not yet supplied with manufacturing machinery. In Graves county "not half so much is sown this spring as last year, when quantities of it were destroyed by the frost for lack of manufacturing apparatus. The people have nothing but the ordinary wooden mills."

Flax.—There is nearly an average breadth of flax this season. In condition it is 10 tenths in most of the States. In some of the flax-growing States of the west it is slightly under an average.

Potatoes.—In every State there were more potatoes planted than usual. In Ohio, 15 per cent. more; in Kentucky, 20 per cent.; in Missouri, 25 per cent.; in Kansas, 30 per cent. In condition no States, except Illinois and Minnesota, are reported at less than 10 tenths; and in these States the increased average indicates a prospect for a full average crop. A correspondent in Superior, Wisconsin, says: "I think our potatoes will be as much injured this year by the drought as they have in some years past by the rains."

Beans.—Very nearly an average acreage is reported in slightly better than average condition.

Fruits.—The prospect for apples is not as good as usual. In the northern parts of New England, 10 tenths; in Connecticut, 8 tenths; in New York, 8½ tenths; in Michigan, 9⅗ tenths; in Missouri, Iowa, and Kansas, 10 tenths each.

No fruit upon our list makes so poor a showing as peaches. (See tables.) New Jersey reports but 16 per cent. of a crop; Ohio, 1⅜ tenths; Delaware, 2⅓ tenths; Maryland, 48 per cent.; New York, 8 tenths; Michigan, 7⅔ tenths. The extreme west makes a better showing.

Pears are in better condition, but give promise of a full crop in only Minnesota and Nebraska.

Grapes have suffered also. Our reports indicate 6½ tenths in Ohio, 9½ tenths in Missouri, 8½ in Illinois, 9 in New York.

There was also a short supply of strawberries and raspberries. As in all other crops this year, the States across the Mississippi take the lead and show more than an average. But the middle and mid-western States produce the principal portion of the crop.

Table showing the condition of the crops on the 1st day of July, 1866.

States.	Average condition of winter wheat.	Average condition of winter rye.	Average condition of winter barley.	Average condition of spring wheat.	Average condition of spring barley.	Average condition of oats.	Average condition of pastures.	Average condition of clover fields.	CORN.	
									Amount planted compared with last year.	Condition of the same.
Maine	9 3/7	10	10	10 1/3	9 5/6	10 1/3	9 1/4	7	9 1/2	9
New Hampshire	9 1/3	10 4/7	9	10 4/7	10 5/7	11	9 1/2	8	9 5/7	9 2/7
Vermont	9 1/4	10	8	10 1/3	10 1/2	10 5/7	10	8 1/7	10 2/7	9 3/7
Massachusetts	10	9 5/6	10	10	10 1/4	10 3/4	9 3/3	7 9/10	10	9 3/3
Rhode Island	10	10 1/3	.....	.....	10 3/3	10 1/3	10	6 1/3	10	9 1/3
Connecticut	8 1/2	8	7	10	11	11	9	7	10 1/2	9
New York	9 1/4	9 1/3	9	10	10 1/3	11	10	9 2/3	10	9 1/4
New Jersey	9 1/5	9 1/2	.....	10	10 1/4	10 1/2	9 1/3	8 1/2	10 1/4	9 2/3
Pennsylvania	9 1/4	9 2/5	8 1/2	9 2/3	9 1/2	10 1/4	9 1/3	8	10 3/7	9 3/4
Maryland	8 1/3	9 3/9	.....	.....	10 1/2	10	9 2/3	8 1/2	10	8 1/5
Delaware	10	10	.....	.....	10	10	9	9	10 1/5	9
Kentucky	9 1/4	8 1/3	9	9 1/2	9	10 1/3	9 1/2	9 1/2	10 7/8	10
Ohio	7	8 1/2	6 2/3	9 1/2	10	10	10	8	11	10
Michigan	9 1/4	9 2/3	9 1/3	10 1/5	10 1/2	11 1/3	10 1/3	8 1/3	10 3/4	9 1/6
Indiana	9 1/2	9 3/4	9	10	9 3/5	10	9 2/3	8 2/5	11 3/5	9 3/4
Illinois	10 4/7	10	8 4/5	10 1/2	10	10 1/3	9 1/2	8 3/3	11	9
Missouri	11 1/2	10 1/3	9 3/4	11	10 1/2	11 1/2	11 2/5	11	13	9 3/4
Wisconsin	9 1/2	9 3/4	10 1/3	11 1/3	11	11	10 3/4	9 3/3	10	8 2/3
Iowa	10	9 5/6	9 1/2	10 1/6	11 2/5	11 2/5	11 2/5	10 1/3	10 7/8	7
Minnesota	10 7/10	10 5/9	10	10 2/5	10	10 1/5	11 1/7	10 1/3	11	8 2/3
Kansas	12 2/5	11 3/3	11 5/7	11 1/3	11 1/3	12 3/5	12 1/3	12 2/9	11 3/5	10
West Virginia	6 5/6	8 1/2	8 1/2	8 2/5	8 6/7	10 3/3	9 3/5	8 1/2	11 1/2	10 1/2
Nebraska Territory	9 3/4	10 2/5	12	13	12 2/7	11 2/3	12 3/3	13 1/2	10 1/4	8 1/3

Table showing the condition of the crops—Continued.

States.	SORGHUM.		FLAX.		POTATOES.		BEANS.		APPLES.	
	Amount planted compared with last year.	Condition of the same.	Amount sown compared with last year.	Condition of the same.	Amount planted compared with last year.	Condition of the same.	Amount planted compared with last year.	Condition of the same.	Amount compared with an ordinary crop.	Condition of the same.
Maine	10	10	9½	10	10½	9¾	10	10	10⅝	10⅛
New Hampshire	.....	.....	10⅜	10	10½	10⅞	10	9⅝	10	10
Vermont	10	9	9	10	10⅜	10⅜	9⅝	10	10	10⅜
Massachusetts	12	9	10	9	10⅛	10¼	10½	10	9 1/10	8¼
Rhode Island	.....	.....	.....	.....	10⅜	10⅜	10	10	7⅜	9⅛
Connecticut	10	8½	11	10	10½	10	10	9½	8	8½
New York	12⅕	8⅜	9	10	11	10½	9½	10	8½	9⅛
New Jersey	9⅜	10	3½	10½	10¼	10¼	9½	10	10¾	9⅞
Pennsylvania	10¾	9½	9⅜	9½	10⅝	10⅜	10	9¾	7½	9
Maryland	8⅜	9½	9	10⅛	10½	10½	10	10	7⅘	9
Delaware	10⅕	9	8	8⅛	10⅓	10⅕	9⅕	10	9⅓	9⅓
Kentucky	9⅜	9⅔	9⅜	10	12	11	9⅔	10	6	9
Ohio	10	9½	9¼	10⅕	11½	11¾	10⅕	9¾	7½	8⅘
Michigan	11¾	9⅛	9⅘	9⅗	10⅞	10⅛	8⅛	9⅗	7⅕	9½
Indiana	9¼	9⅗	9½	10⅑	11	10	9¾	9¾	6⅚	9
Illinois	7⅗	9	10½	9¾	10⅕	9⅘	9¼	9⅔	8½	9⅛
Missouri	10⅑	9½	10⅗	9⅚	12½	11	10⅘	10	7¾	9¼
Wisconsin	8	8	9⅙	10⅕	10	10	8⅘	9½	8½	9¼
Iowa	9⅞	9⅕	10	10	10⅘	10⅜	10¼	10⅕	9⅙	9⅓
Minnesota	9	8	8⅗	9⅞	10⅖	9⅜	9⅜	9⅗	10½	9¾
Kansas	10⅛	9⅔	10	9½	13	12	11	10⅙	10	10⅗
West Virginia	10	10	10	10	11	11⅕	10¼	10	5	6½
Nebraska Territory	8⅛	8¾	.....	.....	10	10¼	10¼	10½	6⅓	8⅛

Table showing the condition of the crops—Continued.

States.	PEACHES.		PEARS.		GRAPES.		STRAWBERRIES.		RASPBERRIES.	
	Amount of peaches compared with an ordinary crop.	Condition of the same.	Amount of pears compared with an ordinary crop.	Condition of the same.	Amount of grapes compared with an ordinary crop.	Condition of the same.	Amount of strawberries compared with an ordinary crop.	Condition of the same.	Amount of raspberries compared with an ordinary crop.	Condition of the same.
Maine	.....	.....	9 4/7	9 5/7	9 1/2	9 3/9	8 2/5	9	9 1/2	10
New Hampshire	2 3/3	3	9	9 3/3	9 1/5	9 1/5	8 1/5	8 3/5	10	10 1/5
Vermont	.....	.....	6 3/3	8 2/3	8 2/3	9 1/3	9 4/7	10 2/7	10	10
Massachusetts	4 1/2	4 2/4	9 1/2	9 7/10	9 1/5	9 1/2	8	8 3/3	10 1/9	10 1/4
Rhode Island	1 2/3	1 3/3	9 1/3	9 1/3	10	10	8	9	10	10
Connecticut	2	4	9 1/2	10	9	9	8	9	10	10
New York	8	8 1/2	8 1/4	9 1/4	9	9	9	9	10 1/2	9 3/3
New Jersey	1 6/10	4 3/10	8 1/3	9 1/2	8 1/2	9 1/5	8 1/2	9 1/2	8 1/2	9 1/4
Pennsylvania	6 1/3	8 1/4	7	8 2/4	8	9	8	9	9 1/2	9 2/4
Maryland	4 4/5	8 1/2	6 3/3	8 3/3	7 3/3	9	6 1/3	8 3/3	8 1/3	9 1/3
Delaware	2 1/3	5 1/3	6 1/3	7	9 1/3	9 1/3	8	8 1/3	7 3/3	7 3/3
Kentucky	5	8	6	8 2/5	10	10 1/6	9	8 2/3	9	9 3/3
Ohio	1 2/5	3 3/4	7	8 3/3	6 1/2	9 1/2	7 1/3	8 7/9	9 1/6	9 3/3
Michigan	7 3/3	9 1/3	7 1/3	9 2/3	7 3/3	9	8	9 1/2	9 1/3	9 6/7
Indiana	3 1/7	6 6/7	5 1/2	9	7 1/3	9 3/5	8	9 1/5	9 1/4	9 1/9
Illinois	5	6	8 1/6	9 3/4	8 1/2	9 1/3	9 1/3	9 2/5	9 3/5	9 1/5
Missouri	6 1/9	8 1/3	7 1/2	9 1/2	9 1/2	9 3/3	11 1/2	10 3/3	10 3/3	10 1/3
Wisconsin	2	2 1/2	7 3/4	8 1/3	10 1/6	10	10 1/3	10	10 3/4	10 3/4
Iowa	5	4 1/3	8 1/2	9 3/3	10 3/3	10 1/3	9 1/3	11	10 1/2	10 1/2
Minnesota	10	10	10	10	10	9 5/7	11	10 3/4	10	10 3/3
Kansas	13	10 1/5	9 1/6	11 1/3	11 1/2	10 1/2	14 1/2	11 3/3	13	12
West Virginia	6 1/2	6	6	7 4/5	9 1/3	9 1/3	7 1/2	8 4/5	9 5/5	9 1/2
Nebraska Territory	5	5	10	9 1/3	9 1/3	8 1/3	13 3/3	13 1/3	12 1/4	12 1/4

PRODUCTION AND CONSUMPTION OF WOOL.

An erroneous impression exists in many minds relative to the amount of wool manufactured in this country. Because almost fabulous increases have been effected in army enlistments, the contraction of national indebtedness, and in the popular estimate of national power, it is thoughtlessly assumed that the number of pounds of wool worn annually per capita is augmented in like proportion. There has been much annual waste by a million of men in arms, but they constituted but three per cent. of the population; and with a plethora of currency, and high prices of labor, the people at large were able to wear more woollens. This has increased the per capita consumption from 4½ or 5 pounds to 6 pounds per annum at a fair estimate.

It should be remembered that in 1830 the value of woollen manufactures was but $14,528,166; in 1840 it was $20,696,999; in 1850, $43,207,545; in 1860, $68,865,965, in which 80,386,572 pounds of wool were consumed. This was the highest figure ever attained before the war. Now, examine the facts of later consumption of wool in manufacture, and the results will show a progress sufficiently encouraging without indulging in vague and wild estimates which are far beyond the truth.

The following tables are the official figures representing the wool imports from July 1, 1861, to June 30, 1865, inclusive—four years. They show an aggregate of wool and shoddy (27,155,133 pounds of the latter) amounting to 279,183,049 pounds. This, with the wool produced in those four years, constitutes nearly the amount manufactured. To be exact, something should be deducted from the aggregate of wool, on account of the greater amount on hand July 1, 1865. The available wool product of the United States is, therefore, fairly estimated as follows:

	Pounds.
1861	55,000,000
1862	67,500,000
1863	82,500,000
1864	95,000,000
Total	300,000,000

The wool of the above-mentioned years, and the imports referred to, less the difference in the amount on hand, comprise the amount manufactured in that period.

	Pounds.
Amount produced	300,000,000
Amount imported	279,183,049
Total	579,183,049
Yearly average for consumption	144,795,762

The estimate of consumption in the calendar year of 1864, made by this department, was 160,000,000 pounds, and 120,000,000 of that aggregate were obtained from actual returns of manufacturers. It is possible that the total aggregate, had it all been obtained from actual returns, would have exceeded slightly 160,000,000 pounds, but the above showing of a wool supply not exceeding 145,000,000 pounds per annum for the four years, would corroborate

strongly the presumed accuracy of the estimate of last year. In the earlier part of the war the mills were in operation night and day; in the latter part their running time was less, but their number and capacity were greater.

Thus it is seen that we manufactured double the amount of wool that we did in 1860, and that during the entire period of the war the increase over the then unprecedented consumption of that year averaged fully seventy-five per cent.

In addition to the amount of wool manufactured in this country, the amount of woollens imported must be taken into consideration. The sum total, as appears from the following tables, was $87,782,918 during the same period. This is $21,945,729 for each year.

It will be readily seen from these figures that an average supply, in time of peace, of all needed woollens can very soon be attained if wool of the United States is not displaced by low-priced foreign wools.

Statement of wool imported during the year ending June 30, 1862.

Countries.	Wool.		Shoddy or flocks.	
	Pounds.	Dollars.	Pounds.	Dollars.
Russia and dependencies	292,089	36,859	.....	.....
Hamburg and Bremen	208,799	35,037	1,875,930	107,300
Holland and Dutch colonial possessions	24,730	3,255	51,154	3,044
Belgium	1,023,439	157,893	643,904	38,337
England, Scotland, and Ireland	16,006,963	2,699,049	3,322,658	271,725
Canada and British North American possessions	100,072	11,149	1,135	110
British West Indies and South American possessions	44,651	5,007	1,980	125
British possessions in Africa and Mediterranean	3,920,257	665,480	.....	.....
British East Indies and Australia	783,670	112,118	.....	.....
France	4,438,429	813,373	391,728	21,651
Spain and Canary Islands	425,803	63,525	.....	.....
Spanish West Indies, Cuba, and Porto Rico	94,808	9,680	.....	.....
Portugal and Portuguese colonies	129,275	18,106	.....	.....
Italy	429,793	59,433	2,588	84
Austria	112,610	16,983	.....	.....
Turkey in Europe, Asia, and Egypt	3,710,506	392,616	.....	.....
Mexico	31,209	3,560	.....	.....
New Granada and Venezuela	207,417	22,193	.....	.....
Brazil	618,481	88,574	.....	.....
Uruguay	14,061	1,386	.....	.....
Buenos Ayres	5,786,868	838,850	.....	.....
Chili	2,793,501	289,895	.....	.....
China and Japan	7,714	857	.....	.....
Sandwich and Pacific islands	10,926	1,112	.....	.....
Liberia and Western Africa	438,170	78,777	.....	.....
Total dutiable wool	41,654,241	6,624,767	6,291,077	442,376
Under reciprocity treaty	1,916,785	569,839	.....	.....
Total	43,571,026	7,194,606	.....	.....

Statement of wool imported during the year ending June 30, 1863.

Countries.	Wool.		Shoddy.	
	Pounds.	Dollars.	Pounds.	Dollars.
Russia and dependencies	1,758,367	275,651	68,412	5,470
Hamburg and Bremen	356,461	85,690	2,179,508	137,066
Holland and Dutch colonial possessions	88,619	11,593	26,186	1,627
Belgium	2,988,889	493,312	691,326	45,213
England, Scotland, and Ireland	17,619,123	3,384,866	3,652,569	325,382
Gibraltar and Malta	598,241	67,341	.....	.....
Canada and British North American possessions	52,872	9,243	15,789	1,125
British West Indies, Central and South America	8,610	905	.....	.....
British possessions in Africa	6,711,975	1,179,707	.....	.....
British East Indies and Australia	118,234	16,753	.....	.....
France	9,643,764	1,632,843	1,195,078	62,977
Spain and Canary Islands	981,468	152,730	6,055	292
Spanish West Indies, Cuba, and Porto Rico	72,409	11,577	.....	.....
Portugal and colonies	167,903	27,492	.....	.....
Italy	328,284	51,038	13,518	495
Turkey in Europe and Asia	4,213,473	618,776	.....	.....
Mexico	1,226,820	155,450	.....	.....
South America	22,481,521	3,168,434	19,160	1,587
China and Japan	19,750	2,287	.....	.....
Sandwich Islands and whale fisheries	38,906	4,954	.....	.....
Ports in Western Africa	2,442,065	421,522	.....	.....
Total dutiable wool	71,917,754	11,772,164	7,867,601	581,234
Under reciprocity treaty	1,980,053	781,867	.....	.....
Total	73,897,807	12,554,031	.....	.....

Statement of wool imported during the year ending June 30, 1864.

Countries.	Wool.		Shoddy or flocks.	
	Pounds.	Dollars.	Pounds.	Dollars.
Russia and dependencies	4,643,305	801,291	.....	.....
Denmark, Norway, and Swedish West Indies	44	3	.....	.....
Hamburg and Bremen	390,142	106,723	1,850,283	130,852
Holland colonial possessions	16,006	1,615	7,989	579
Belgium	1,511,347	343,941	697,012	51,273
England, Scotland, and Ireland	13,099,501	2,715,843	4,944,133	379,461
Gibraltar, Malta, and Greece	244,678	38,236	.....	.....
Canada and British North American provinces	12,936	2,579	44,005	3,654
British West Indies and Central and South America	1,101	166	.....	.....
British possessions in Africa	13,717,900	2,415,145	.....	.....
British Australia and East Indies	864,548	177,209	.....	.....
France	10,945,299	1,771,423	541,200	53,920
Spain and Canary Islands	179,722	28,734	.....	.....
Spanish West Indies, Cuba, and Porto Rico	5,529	1,255	.....	.....
Portugal and colonies	230,914	38,407	.....	.....
Italy	1,261,078	65,400	48,481	1,756
Turkey in Europe, Asia, and Egypt	5,534,693	805,115	.....	.....
Mexico	702,676	96,111	.....	.....
Central America	114	21	.....	.....
South America	31,134,935	4,729,014	288	19
China and Japan	63,069	7,666	.....	.....
Sandwich Islands and whale fisheries	169,838	30,272	.....	.....
Other Pacific ports	8,522	1,236	.....	.....
Other ports in Africa	2,455,565	417,735	.....	.....
Total dutiable wool	87,193,462	14,595,140	8,133,391	621,514
Under reciprocity treaty	3,202,642	1,328,851	.....	.....
Total	90,396,104	15,923,991	.....	.....

Statement exhibiting the quantity and value of wool imported into the United States during the year ending June 30, 1865.

Countries.	Wool on the skin and wool skins.	Wool: value 12 cents per pound or less.		Wool: value over 12 cents and not over 24 cents per pound.		Wool: value over 24 cts. and not over 32 cts. per pound.		Wool: value over 32 cents per pound.		Wool, scoured: value over 32 cents per pound.		Woollen flocks, or shoddy.	
	Dollars.	*Pounds.*	*Dollars.*	*Pounds.*	*Dollars.*	*Pounds.*	*Dollars.*	*Pounds.*	*Dollars.*	*Pounds.*	*Dollars.*	*Pounds.*	*Dollars.*
Russia on the Baltic and North Seas		212,770	27,685	258,836	54,392								
Russia on the Black Sea		1,086,432	111,166	1,190,441	228,315								
Danish West Indies	79	4,700	538	682	144								
Hamburg				104,495	13,383							1,286,731	92,447
Bremen	1,656			150	28							175,589	13,111
Holland												6,254	351
Dutch West Indies	140	9,617	1,060	2,430	367								
Belgium		6,413	851	31,113	6,370			6,704	5,212	47,524	26,587	317,718	26,115
England	2,408	676,668	74,052	1,298,714	260,495	3,062	1,022	1,732	941			2,866,969	256,455
Gibraltar				71,573	12,638								
Canada						20	5					1,900	240
British Am. possessions on the Pacific		6,302	646										
British West Indies	851	1,027	101	55,388	9,580	189	55						
British possessions in Africa	55,297	32,290	3,807	8,279,973	1,529,989			505	198				
British East Indies		138,860	16,611	605,273	127,856	27,773	8,236	6,059	2,293				
Australia	3,802			408,592	90,573								
France: Atlantic								92	122			179,271	20,307
France: Mediterranean		111,305	15,851	737,290	126,698							28,632	1,369
Spain				234,985	38,506								
Portugal		2,009	131										
Cape de Verde Islands		1,874	211										
Italy				63,107	13,892								
Austria				32,946	7,527								
Greece		234,852	26,792										
Turkey in Europe		135,007	10,758										
Turkey in Asia		353,240	41,589	102,300	20,072								
Other ports in Africa		645,719	93,198	895,056	154,878								
Hayti	20												
Mexico	1,468	257,969	29,371	81,481	14,651								
Central America	9												
New Granada		47,132	4,353	24,020	4,394								
Venezuela													
Brazil		261,982	29,380	615,447	90,644								
Cisplatine Republic	2,567	188,364	19,022	975,896	177,979								
Argentine Republic	39,470	9,859,618	1,199,056	6,244,271	1,024,697								
Chili		3,019,861	305,581	342,612	64,614								
Sandwich Islands		3,236	365	28,497	4,783								
China				906	125								
Countries not enumerated	826			294,694	66,672								
Total dutiable	108,593	17,297,247	2,012,175	22,981,168	4,144,262	31,044	9,318	15,092	8,766	47,524	26,587	4,863,064	410,395

Wool imported under reciprocity treaty, 3,486,079 pounds; value, $1,527,275. Total, 43,858,154 pounds; value, $7,728,383, exclusive of wool on the skin and shoddy.

Years.	WOOL.		SHODDY OR FLOCKS.	
	Pounds.	Dollars.	Pounds.	Dollars.
1862	41,654,241	6,424,767	6,291,077	442,376
1863	71,917,754	11,772,064	7,867,601	581,234
1864	87,193,462	14,595,140	8,133,391	621,514
1865	40,372,075	6,201,108	4,863,064	410,395
Total	241,137,532	38,993,079	27,155,133	2,055,519

This is the amount of wool bearing a duty, which has been imported in this period. In addition, the amount introduced free under the reciprocity treaty with Great Britain is as follows:

Years.	Pounds.	Dollars.	Cents per pound.
1862	1,916,785	569,839	29.7
1863	1,989,053	781,867	39.5
1864	3,202,642	1,328,851	41.4
1865	3,486,079	1,527,275	43.8
Total	10,585,559	4,207,832	39.6

The total foreign supply of our woollen manufactures in the four years reported was, therefore, as follows:

	Pounds.	Cost.
Dutiable wool	241,137,532	$38,993,079
Free from Canada	10,585,559	4,207,832
Free in 1862 from other countries	304,825	55,539
Shoddy	27,155,133	2,055,519
Total	279,183,049	45,311,969

Statement of woollens imported for four years ending June 30, 1865.

	1862.	1863.	1864.	1865.
Woollen cloths and shawls	$5,547,644	$5,147,404	$10,698,035	$5,257,819
Blankets	1,945,707	1,297,864	749,793	838,741
Woollen and worsted yarns	372,523	383,011	434,549	393,130
Delaines and dress goods	17,229	1,744,639	10,069,768	7,817,139
Carpets	466,596	1,016,562	1,658,380	471,659
Flannels	30,798	.....	457,410	83,329
Felt and lasting	68,485	.....	102,910	87,213
All others	6,435,412	10,822,145	7,968,491	5,398,533
Total	14,884,394	20,411,625	32,139,336	20,347,563

Total woollens imported, 1862	$14,884,394
Total woollens imported, 1863	20,411,625
Total woollens imported, 1864	32,139,336
Total woollens imported, 1865	20,347,563
Total for four years	87,782,918

Statement of exports of wool and woollens.

Years.	PRODUCT OF UNITED STATES.			PRODUCT OF FOREIGN COUNTRIES.		
	Wool.		Woollen goods.	Wool.		Woollen goods.
	Pounds.	Dollars.	Dollars.	Pounds.	Dollars.	Dollars.
1861	.....	237,846	.....	199,226	56,432	.....
1862	1,153,388	296,225	.....	332,953	76,708	221,570
1863	355,722	178,434	.....	414,427	109,403	206,127
1864	155,482	66,358	81,943	223,475	134,634	120,190
1865	446,182	254,721	132,544	658,582	288,501	431,619

The exports, as heretofore, are of trifling amount. The exports of woollen goods of American manufacture were scarcely deemed worthy of separate enumeration, until 1864, in official summaries.

AGRICULTURAL EXPORTS.

Statement of the exports of the growth and agricultural products of the United States, with their immediate manufactures, for the years ending June 30, 1862, and June 30, 1863.

Products and manufactures.	1862.		1863.	
	Quantity.	Value.	Quantity.	Value.
Of animals:				
Hogs.....number..	3,306	$23,562	9,467	$96,363
Pork.....tierces..	2,102	3,980,153	1,155	4,334,775
Do.....barrels..	305,949		326,119	
Hams and bacon....pounds..	141,212,786	10,290,572	218,243,609	18,658,280
Lard.....pounds..	118,573,307	10,004,521	155,336,596	15,755,570
Lard oil.....gallons..	239,608	148,056	1,259,063	983,349
Horned cattle.....number..	3,634	197,019	5,509	236,547
Beef.....tierces..	57,234	2,017,077	56,373	2,185,921
Do.....barrels..	50,171		61,739	
Tallow.....pounds..	46,773,768	4,026,113	63,792,754	6,738,486
Hides.....	.....	518,687	.....	355,855
Butter.....pounds..	26,691,247	4,164,344	35,172,415	6,733,743
Cheese.....pounds..	34,052,678	2,715,892	42,045,054	4,216,804
Candles.....pounds..	6,100,029	901,330	6,838,353	1,187,864
Soap.....pounds..	9,986,984	636,049	9,097,664	736,524
Horses.....number..	1,534	157,442	1,296	132,542
Mules.....number..	3,237	212,187	3,561	332,233
Leather and morocco skins...	.....	13,049	.....	18,719
Leather.....pounds..	1,775,556	389,007	2,203,284	634,574
Boots and shoes.....pairs..	679,594	721,241	1,214,468	1,329,009
Sheep.....	.....	34,600	.....	39,504
Wool.....pounds..	1,153,388	296,225	355,722	178,434
Skins and furs.....	.....	794,407	.....	2,226,275
Wax.....pounds..	142,312	47,383	258,901	80,899
Apples.....barrels..	66,767	238,923	174,502	364,628
Potatoes.....bushels..	417,138	300,599	517,530	413,581
Onions.....	.....	90,412	.....	122,422

Statement—Continued.

Products and manufactures.	1862.		1863.	
	Quantity.	Value.	Quantity.	Value.
Breadstuffs:				
Indian corn.....bushels..	18,904,898	$10,387,383	16,119,476	$10,592,704
Indian meal.....barrels..	253,570	778,344	257,948	1,013,272
Wheat.....bushels..	37,289,572	42,573,295	36,160,414	46,754,195
Flour.....barrels..	4,882,033	27,534,677	4,390,055	28,366,069
Rye meal.....barrels..	14,463	54,488	8,684	38,067
Rye, oats, &c.....	.....	2,364,625	.....	1,833,757
Rice.....	.....	156,899	.....	83,404
Biscuit or ship-bread.....	.....	490,942	.....	582,268
Cables and cordage.....cwt..	19,390	199,669	29,011	409,050
Cotton, Sea Island....pounds..	66,443	1,180,113	527,747	6,652,405
other kinds...pounds..	4,998,121		10,857,239	
Cotton piece goods:				
Printed or colored.....	.....	578,500	.....	630,558
White, other than duck.....	.....	508,004	.....	254,751
Duck.....	.....	221,685	.....	69,526
All other manufactures of....	.....	1,629,275	.....	1,951,576
Clover-seed.....bushels..	66,064	295,255	389,554	2,185,706
Flax-seed.....bushels..	15	59	40,759	96,805
Linseed oil.....gallons..	25,062	20,893	25,131	29,861
Oil cake.....	.....	875,841	.....	1,277,735
Hemp.....tons..	124	8,300	546	70,348
all manufactures of.....	.....	31,940	.....	123,656
Ginseng.....pounds..	630,714	408,590	372,945	295,129
Hops.....pounds..	4,851,246	663,308	8,864,081	1,733,265
Spirits of turpentine..gallons..	43,507	54,691	58,565	143,777
Salt.....bushels..	397,506	228,109	584,901	277,838
Beer, ale, porter, and cider.....	.....	54,696	.....	129,176
Spirits from grain....gallons..	768,295	328,834	2,633,391	1,390,610
from molasses..gallons..	2,496,220	715,694	2,908,436	1,064,717
from other mat's..galls..	3,956,359	1,577,909	1,855,098	950,245
Molasses.....gallons..	45,009	21,914	39,290	19,465
Vinegar.....gallons..	268,927	29,701	256,956	34,431
Sugar, brown.....pounds..	1,284,849	90,022	380,348	31,497
Sugar, refined.....pounds..	1,470,403	147,397	3,214,661	361,034
Tobacco.....	.....	12,325,356	.....	19,752,076
Tobacco, manufactured.....	4,071,963	1,068,730	7,025,248	3,384,544
Snuff.....pounds..	38,839	7,914	44,924	13,633
Wood and its products:				
Staves and heading.....M..				
Shingles.....M..				
Boards, plank and scantling M feet..				
Hewn timber.....tons..	.....	7,917,417	.....	14,342,058
Other lumber.....				
Oak bark and other dyewood				
Manufactures of wood.....				
Ashes, pot and pearl.....cwt..	74,895	457,049	61,313	513,704
Tar and pitch.....barrels..	9,765	55,884	11,956	102,566
Rosin and turpentine..barrels..	65,441	293,400	17,025	237,991

Statement of the exports of the growth and agricultural products of the United States, with their immediate manufactures, for the years ending June 30, 1864, and June 30, 1865.

Products and manufactures.	1864.		1865.	
	Quantity.	Value.	Quantity.	Value.
Of animals:				
Hogs ..... number..	9,199	$86,907	1,400	$12,771
Pork ..... tierces..	.....	.....	838	6,843,135
Do ..... barrels..	317,597	5,828,030	207,294	
Hams and bacon ... pounds..	110,886,446	12,323,327	45,990,712	10,521,702
Lard ..... do....	97,190,765	11,260,728	44,342,295	9,107,435
Lard oil ..... gallons..	440,546	377,994	99,250	155,454
Horned cattle ..... number..	6,191	117,573	9,588	159,179
Beef ..... tierces..	.....	.....	50,392	3,304,771
Do ..... barrels..	178,332	3.023,018	59,822	
Tallow ..... pounds..	55,197,914	6,215,260	30,622,865	4,979,135
Hides ..... number..	56,071	305,111	205,950	1,023,596
Butter ..... pounds..	20,895,435	6,140,031	21,388,185	7,234,173
Cheese ..... do....	47,751,329	5,638,007	53,089,468	11,684,927
Candles ..... do....	5,765,869	1,088,882	5,017,712	1,259,168
Soap ..... do....	8,185,088	790,872	7,327,834	983,477
Horses ..... number..	821	72,674	690	110,270
Mules ..... do....	15	2,488	350	52,115
Fine leather and morocco, skins..	.....	21,108	.....	150,828
Leather ..... pounds..	824,762	290,657	1,287,407	517,717
Boots and shoes ..... pairs..	755,792	1,415,775	522,308	2,023,210
Sheep ..... number..	9,301	39,185	13,782	72,198
Wool ..... pounds..	155,482	66,358	466,182	254,721
Skins and furs	.....	1,795,417	.....	1,648,863
Wax ..... pounds..	341,458	170,418	338,776	261,381
Apples ..... barrels..	183,969	487,140	120,063	479,256
Potatoes ..... bushels..	463,212	473,911	510,344	724,593
Onions	.....	136,260	.....	220,694
Breadstuffs:				
Indian corn ..... bushels..	4,096,684	3,353,280	2,812,726	3,679,133
Indian meal ..... barrels..	262,357	1,349,765	199,419	1,489,886
Wheat ..... bushels..	23,681,712	31,432,133	9,937,152	19,397,197
Flour ..... barrels..	3,557,347	25,588,249	2,604,542	27,222,031
Rye meal ..... do....	6,999	37,991	3,935	32,438
Rye and small grains . bushels.	893,809	957,394	691,152	846,444
Rice ..... barrels..	5,442	84,217	2,395	63,430
Biscuit or ship bread	.....	660,324	.....	771,952
Cables and cordage ..... cwt..	39,945	553,497	52,419	972,348
Cotton, Sea-island .... pounds..	132,521	127,783	330,584	296,179
other kinds ..... do....	11,860,390	9,768,071	6,276,582	5,424,370
Cotton piece goods:				
Printed or colored	1,596,235	401,411	1,080,521	618,223
White, other than duck	177,065	56,639	100,265	44,742
Duck	62,621	50,239	77,618	101,796
All other man'fact'r's of cotton.	.....	948,612	.....	2,566,821
Clover-seed ..... bushels..	2,384,857	501,175	2,169,426	446,845
Flax-seed ..... do....	1,708	5,808	39,369	120,091
Linseed oil ..... gallons..	143,301	81,751	64,913	110,156
Oil-cake	60,811	1,609,833	36,512	2,267,393
Hemp ..... tons..	1,751	246,257	2,111	259,393
all manufactures of	.....	93,222	.....	119,738
Ginseng ..... pounds..	360,950	474,920	414,507	547,653
Hops ..... do....	5,851,165	1,217,075	3,662,734	1,348,263
Spirits of turpentine ... gallons..	32,548	87,988	42,518	95,747
Salt ..... bushels..	635,519	296,088	582,803	355,469

Statement—Continued.

Products and manufactures.	1864.		1865.	
	Quantity.	Value.	Quantity.	Value.
Of animals:				
Beer, ale, porter, and cider	.....	$126,317	.....	$163,151
Spirits from molasses..gallons..	1,180,641	527,115	1,149,859	708,134
Spirits from other material..do...	369,222	332,786	218,551	394,770
Molasses.....do...	47,455	23,239	28,221	16,308
Vinegar .....do...	216,991	41,825	136,414	46,100
Sugar, brown .....pounds..	525,151	65,368	116,240	20,617
Sugar, refined .....do....	1,803,332	259,937	1,309,522	284,906
Tobacco	.....	22,845,936	.....	41,592,138
Tobacco, manufactured	8,587,472	3,631,070	7,297,878	3,580,245
Snuff.....pounds..	28,277	16,813	93,159	39,129
Wood and its products:				
Staves and heading..thousand..	44,103	2,458,266	33,029	2,911,310
Shingles.....do....	30,344	137,222	33,034	173,760
Boards, plank and scantling, M feet..	132,298	3,064,264	158,774	4,340,664
Hewn timber .....tons..	6,742	87,289	4,133	69,699
Other lumber	.....	1,642,976	.....	3,422,719
Oak bark and other dyewood.	.....	194,575	.....	158,495
Other manufactures of wood .	.....	865,281	.....	1,254,888
Ashes, pot and pearl .....cwt..	48,904	468,626	52,677	727,229
Tar and pitch .....barrels..	7,156	70,782	11,529	76,034
Rosin and turpentine....do....	2,418	55,551	11,232	157,662

Recapitulation of exports of the growth and agricultural products of the United States, and their immediate manufactures, from 1856, *to* 1865, *inclusive.*

	1856.	1857.	1858.	1859.	1860.
Animal productions...	$21,411,900	$20,593,413	$19,946,411	$17,602,413	$24,666,798
Breadstuffs	59,010,219	57,915,232	35,569,068	23,562,169	26,989,709
Wood and its products.....	9,566,037	13,525,339	12,279,597	13,073,850	12,909,585
Cotton and its manufactures	135,349,660	137,691,036	137,038,165	169,751,145	202,741,351
Miscellaneous	20,497,763	28,477,756	26,198,678	30,700,573	26,783,464
Total.....	245,835,579	258,202,776	231,031,919	254,690,150	294,090,907

	1861.	1862.	1863.	1864.	1865.
Animal productions...	$27,715,392	$42,288,916	$68,011,371	$56,182,453	$62,361,126
Breadstuffs.....	73,534,544	84,340,653	89,263,736	63,463,353	53,502,511
Wood and its products	9,089,434	8,723,750	15,196,319	9,044,832	13,292,460
Cotton and its manufactures	51,008,521	4,117,577	9,558,816	11,352,755	9,052,131
Miscellaneous	26,687,135	19,788,756	34,756,128	34,710,779	54,913,137
Total.....	188,035,026	159,259,652	216,786,370	174,754,172	193,121,365

Recapitulation of exports of the growth and products of the United States, with their immediate manufactures, for forty years, from 1826 to 1865, inclusive, in periods of five years each, with the total annual average for each period.

Products and manufactures.	Five years ending 1830.	Five years ending 1835.	Five years ending 1840.	Five years ending 1845.	Five years ending 1850.	Five years ending 1855.	Five years ending 1860.	Five years ending 1865.
	Value.	*Value.*	*Value.*	*Value.*	*Value.*	*Value.*	*Value.*	*Value.*
Animals and their products	$23,011,879	$24,365,223	$20,309,261	$33,896,486	$63,473,863	$67,898,685	$104,220,935	$256,559,258
Breadstuffs	42,363,119	48,095,362	47,114,914	51,705,513	142,232,388	134,181,567	203,046,397	364,104,797
Wood and its products	15,632,507	17,403,004	20,043,813	19,331,158	20,383,180	30,248,638	61,354,408	55,346,795
Cotton and its manufactures	139,007,584	217,448,062	336,561,729	273,390,047	319,576,828	526,235,464	782,571,357	85,089,800
Miscellaneous	32,841,875	37,848,758	52,412,149	52,147,603	48,999,940	77,192,944	132,658,234	170,855,935

Annual average for each period of five years.

Animals and their products	$4,602,375	$4,873,044	$4,061,852	$6,779,297	$12,694,772	$13,579,737	$20,844,187	$51,311,851
Breadstuffs	8,472,623	9,619,072	9,422,982	10,341,102	28,446,477	26,836,313	40,609,279	72,820,959
Wood and its products	3,126,501	3,490,600	4,008,762	3,866,231	4,076,636	6,049,727	12,270,881	11,069,359
Cotton and its manufactures	27,801,516	43,489,612	67,312,345	54,678,009	63,915,365	105,247,092	156,514,271	17,017,960
Miscellaneous	6,568,375	7,569,751	10,482,429	10,429,520	9,799,988	15,438,588	26,531,647	34,171,187
Total annual average	50,571,390	69,042,079	95,288,370	86,094,159	118,933,238	167,151,457	256,770,265	186,391,316

METEOROLOGY.

To make room for articles that have been postponed, the tables and notes of the weather for May and June have been condensed.

Observers will oblige us by forwarding their reports, each month, as early as possible.

A. B. G.

TEMPERATURE AND RAIN OF MAY AND JUNE, 1866.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and the amount of rain, (in inches and tenths,) for the months of May and June, 1866, respectively, at the places named. The daily observations were made at 7 o'clock a. m. and at 2 and 9 p. m.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
MAINE.		°		°	°	*In.*		°		°	°	*In.*
Steuben	12	69	1	36	49.7	7.90	26	87	1	44	60.1	2.45
Lee	12	80	8	32	50.7	6.05	27	90	9	44	62.3	.....
West Waterville	12	80	1	37	53.4	3.35	26	89	1, 11	50	64.5	4.30
Gardiner	12, 13	71	8	33	52.8	4.97	26	83	1, 9	48	62.5	3.50
Lisbon	.....	.....	15	32	.....	4.83	26	92	.....	.....	.....	5.15
Webster	12	75	1	36	52.8	.....	26, 27	87	1	48	63.5	.....
Standish	13	82	3	38	53.4	3.85	25	93	9	47	66.3	4.55
Cornish	12	80	4	35	52.0	3.10	25, 27	90	1	46	63.7	4.20
Cornishville	12	79	3	38	53.3	3.51	27	90	1	48	61.8	4.98
NEW HAMPSHIRE.												
Stratford	20	77	2	30	47.1	3.72	25	85	1	38	61.5	4.87
Shelburne	13	82	8	29	50.7	.....	26	92	1	38	63.6	.....
North Barnstead	12	80	2	38	54.1	3.40	25, 26	90	1	46	.....	.....
Concord	12	82	7	41	55.7	3.25	25	94	1	50	66.8	2.00
Claremont	12	81	15	32	53.3	3.75	25	94	1	40	66.5	3.60
Do	20	80	2	34	52.3	.....	26	94	1	44	64.8	.....
VERMONT.												
Lunenburg	10, 11	80	15	18	45.1	3.00	.....	.....	.....	.....	.....	.....
Craftsbury	20	77	1	29	46.8	3.15	25	84	1	40	61.3	2.70
Randolph	12	80	1, 15	31	50.1	1.87	25	90	1	37	64.7	3.54
Middlebury	12, 20	74	1, 2, 3	36	51.9	2.05	25	85	1	43	65.2	3.92
Brandon	20	86	2	31	49.0	2.22	25	94	1	44	66.1	5.22
Barnet	12, 19, 20	85	1, 3	35	52.8	3.25	26	100	1	40	67.6	4.75
Wilmington	.....	.....	.....	.....	.....	.....	25, 26	92	3, 30	51	65.7	.....

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
MASSACHUSETTS.		°		°	°	*In.*		°		°	°	*In.*
Topsfield	13	82	2	42	55.6	5.34	.....	.....	.....	.....	.....	.....
Newbury	13	80	2	40	55.1	.....	25	93	1	48	66.6	.....
North Billerica	13	80	1	40	55.3	.....	25, 26	92	9	48	68.3	.....
New Bedford	28	72	1	36	53.6	4.02	26	87	9	50	60.2	4.00
Worcester	13	76	2	40	54.2	5.33	.....	.....	.....	.....	.....	.....
Mendon	12	77	2	39	54.4	5.05	26	88	9	49	64.5	4.80
Amherst	12	80	1, 2	40	54.6	4.48	25, 26	90	1	48	65.8	5.66
Springfield	12	85	1	32	53.7	5.86	26	97	1	42	65.8	4.88
Westfield	13	77	24	37	54.3	5.54	.....	.....	.....	.....	.....	.....
Richmond	12	82	3, 7, 15	34	57.9	6.82	25	94	1	42	68.0	5.31
Williams College	13	78	1, 15	37	52.3	3.38	25	89	1, 16	52	64.6	4.38
RHODE ISLAND.												
Newport	26	71	2	42	54.4	4.50	26	84	9	52	66.0	4.13
CONNECTICUT.												
Pomfret	16	77	.....	.....	.....	.....	26	87	1	48	63.4	5.15
Columbia	12	83	2	40	57.0	.....	26	95	1, 8	50	66.9	.....
Middletown	20	83	3	40	56.9	5.38	26	97	2	52	69.2	3.02
Colebrook	20	82	3	35	52.7	.....	26	91	1	51	65.6	.....
Groton	.....	.....	3, 4	38	53.5	5.81	26	86	1, 9	45	.....	4.30
NEW YORK.												
Moriches	19	79	1, 3, 4	45	58.7	6.62	26	95	9	56	69.7	2.56
South Hartford	12, 20	85	5	32	59.9	1.06	25	93	2	53	68.6	3.65
Troy	12	78	1	41	58.2	2.43	25	93	1	53	68.7	6.71
Germantown	10	90	3	40	55.9	4.30	26	96	1	50	67.8	6.80
Fishkill Landing	12	79	3, 4	41	56.7	4.63	25	90	1	53	69.9	4.41
Garrison's	20	77	2	39	54.0	4.44	25, 26	92	1	50	66.0	5.64
Throg's Neck	19	80	2	39	52.8	.....	25, 26	90	10	52	67.9	.....
Deaf & Dumb Ins'n	16, 21	74	2	38	56.5	4.46	.....	.....	.....	.....	.....	.....
Columbia College	13	81	2	39	57.6	3.59	26	92	2, 3	54	63.9	2.35
Flatbush	.....	.....	.....	.....	.....	.....	26	92	5	48	61.6	2.23
Newburgh	12, 16	81	2	41	58.3	4.40	26	93	1	55	69.0	4.40
Gouverneur	29	85	2	36	51.5	3.06	25	87	1	50	64.7	4.14
North Hammond	.....	.....	.....	.....	.....	.....	24	88	1	42	64.9	8.74
South Trenton	10, 11	80	15	31	50.7	4.21	25	91	1	40	64.5	7.14
Oneida	20	82	4	31	52.4	4.37	.....	.....	.....	.....	.....	.....
Depauville	20	80	1	35	50.2	3.74	25	84	1	46	63.9	4.08
Oswego	20	81	2, 3, 4, 17	38	51.3	2.88	25	86	1	46	62.1	4.81
Palermo	20	82	1	34	49.7	2.70	25	91	1	39	63.4	4.80
Baldwinsville	12	76	14	36	50.3	.....	25	86	1	42	63.8	.....
Skaneateles	20	82	2, 3	36	51.7	.....	25	92	1	50	64.7	.....
Nichols	20	88	3	37	54.4	.....	25	96	1	45	66.6	.....
Geneva	20	85	3	37	51.3	2.27	25	89	1	48	65.2	4.42
Rochester Univ'y	20	86	2, 3	37	52.4	2.90	25	91	1, 19	54	66.9	3.90
Rochester	20	84	1	38	52.4	2.90	25	91	1, 19	52	66.2	3.90
Little Genesee	20	87	3, 4, 6, 15	32	49.1	.....	25	92	1	40	66.8	1.75
Buffalo	19	81	2	37	50.0	4.86	26	86	1	48	64.0	2.85

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
NEW JERSEY.												
		°		°	°	*In.*		°		°	°	*In.*
Paterson	13	84	2	38	57.7	3.72	26, 27	91	1	53	68.8	4.69
Newark	13	81	4	39	57.4	4.40	25, 26, 27	89	1	50	67.6	2.51
New Brunswick	13	84	2	40	59.1	4.30	25, 26	92	19	56	69.7	2.91
Trenton	13	81	2	46	61.2	4.68	26	93	1, 2, 4, 10, 19, 20	60	75.1	3.66
Burlington	13	80	2, 3	44	58.9	4.05	25, 26	89	1	57	70.5	3.90
Moorestown	13	79	2 3	43	59.0	3.75	26	95	1	56	71.0	2.41
Mount Holly	13	81	4	40	58.9	.....	26	91	2	56	70.7	.....
Seaville	.....	.....	.....	.....	.....	.....	24	91	11	58	72.5	3.80
Haddonfield	.....	.....	.....	.....	.....	.....	26	95	1, 2	57	71.7	2.47
Greenwich	13	77	3	41	58.9	3.45	26	90	1	57	71.3	2.86
PENNSYLVANIA.												
Nyce's	20	80	2	31	53.0	3.30	23, 25	89	3, 18	51	64.7	8.30
Fallsington	13	79	3	41	59.0	3.70	26	91	2, 4	57	69.5	2.90
Philadelphia	13	83	3	46	61.5	4.63	26	97	2	58	73.7	3.39
Germantown	20, 27, 31	79	2	41	.....	.....	26	94	1	55	72.2	.....
Moorland	13	78	2, 3	43	58.3	4.15	25, 26	87	1, 2	55	69.0	5.09
Dyberry	20	82	3, 23	53	42.2	.....	.....	.....	.....	.....	.....	.....
Nazareth	12	84	1	42	59.6	.....	26	93	3	53	69.1	.....
North Whitehall	12	77	15	33	55.3	.....	25, 26	88	1	51	67.8	.....
Parkesville	20	81	3	42	58.8	4.32	26	96	1	56	72.0	3.94
Stevensville	.....	.....	.....	.....	.....	.....	25	95	1	48	68.6	4.34
Ephrata	12	83	4, 23	38	58.3	2.92	25, 26	92	1	55	90.9	7.31
Silver Spring	27	83	3	38	59.4	.....	26	94	11	52	70.6	.....
Harrisburg	20	83	3	43	62.6	2.98	26	94	4	62	73.9	5.78
Lewisburg	20	85	23	38	57.7	3.48	25	92	18	54	69.1	3.64
Tioga	12, 20	86	3	28	52.7	2.15	24, 25, 26	94	1, 29	46	67.7	3.45
Pennsville	20	90	3	32	53.3	1.58	26	92	18, 29	48	66.0	4.38
Connellsville	20	88	3	33	57.5	.....	25	92	18	50	69.7	.....
New Castle	20	82	3	30	56.2	.....	25	88	29	46	68.9	.....
Canonsburg	18	82	3	33	57.2	1.07	26	91	29	51	69.3	4.64
DELAWARE.												
Delaware City	13	82	3	43	60.6	.....	.....	.....	.....	.....	.....	.....
MARYLAND.												
Woodlawn	20	82	3	42	60.8	3.96	25, 26	90	3	59	71.4	9.35
Catonsville	16, 20	79	3	42	60.3	.....	25	90	18	56	71.6	.....
Annapolis	31	79	3	45	62.2	4.33	27	92	19	60	74.6	8.11
St. Inigoes	25	84	3	45	60.4	4.59	26	92	9, 30	64	75.2	3.11
Frederick	20	83	2, 3	40	60.0	1.50	25	91	29	59	77.8	6.75
VIRGINIA.												
Wytheville	20	83	3	40	59.5	.....	25	89	29	48	63.9	.....
WEST VIRGINIA.												
Cabell Court-House	19, 20	85	5	40	61.0	1.70	12	91	17, 18, 29	56	70.2	5.10
Romney	20	83	3, 14	36	56.2	.....	24, 25	94	29	48	67.3	.....

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean. temp.	Rain.
NORTH CAROLINA.		°		°	°	*In.*		°		°	°	*In.*
Wilson	20	92	5	50	67.3	1.85	.....	.....	19	60	.....	4.90
GEORGIA.												
Atlanta	1, 19, 20	82	30	42	63.6	6.87	9, 10, 12, 13	88	19	44	69.6	4.89
ALABAMA.												
Moulton	.....	.....	.....	.....	.....	7.63	25	90	29	57	73.8	5.01
MISSISSIPPI.												
Natchez	28	86	30	54	70.9	9.85	26	89	18	50	76.0	5.65
Grenada	.....	.....	.....	.....	.....	.....	25	88	30	52	.....	.....
FLORIDA.												
Jacksonville	27	97	5	65	78.6	2.95	13	100	18, 21	65	81.5	4.13
Gordon	.....	.....	.....	.....	.....	.....	12, 13	98	18	62	79.1	.....
TEXAS.												
Austin	27	93	29, 30	57	73.9	5.46	20	95	4	62	81.3	2.15
Chapel Hill	28	92	28	60	71.6	4.05	3	92	18, 29	64	79.8	4.05
ARKANSAS.												
Helena	27	93	29	54	70.9	7.38	.....	.....	.....	.....	.....	.....
TENNESSEE.												
Clarksville	19	84	2	44	62.9	2.11	11, 25	88	19, 30	55	71.3	2.84
Lookout Mountain	20	88	.....	.....	.....	.....	12, 24	95	17	54	71.9	.....
KENTUCKY.												
Louisville	19	89	5	36	61.0	1.84	26	92	19, 29	46	72.1	6.48
Chilesburg	19	86	2	43	61.3	2.03	.....	90	29	45	70.4	4.91
Taylorsville	26	89	2	44	63.2	1.21	25	94	30	58	75.0	4.07
OHIO.												
New Lisbon	20	90	3	35	56.9	1.46	25	96	1	45	70.4	11.19
East Fairfield	20	85	3	36	55.4	1.91	25, 26	85	29	49	67.2	6.43
Steubenville	20	87	4	37	61.0	2.50	13, 25, 26	87	29	52	72.2	7.04
Milnersville	19	86	4	25	47.4	1.15	.....	.....	.....	.....	.....	.....
Wooster	19	87	3	39	57.0	.....	12, 25	95	18, 28	52	71.3	.....
Gallipolis	20	87	2, 3, 4	40	59.7	0.73	23	93	18	51	70.9	3.59
Kelley's Island	11	78	2	41	56.3	3.77	23, 25	89	18	53	69.1	7.42
Norwalk	18	82	1	37	55.2	3.22	8, 24, 26	90	18	49	67.4	6.22
Westerville	19	87	2, 4	43	61.0	1.22	8	90	28	51	71.2	5.10
Kingston	19	89	2	43	60.2	1.67	12	94	28	52	71.6	3.01
Toledo	19	84	3	34	55.8	5.38	24	92	18	47	67.4	4.69
Marion	19	82	2, 3	38	56.5	3.37	24, 25	87	18	50	68.6	4.76
Kenton	.....	.....	.....	.....	.....	.....	24	94	18	52	75.0	7.75

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
OHIO—Continued.		°		°	°	*In.*		°		°	°	*In.*
Urbana University	19	88	2	39	58.7	1.59	8, 12	88	18	47	69.3	5.54
Hillsboro'	19	84	2	39	58.7	1.11	12, 25	88	18	51	69.7	4.32
Ripley	.....	.....	.....	.....	.....	.....	24	100	18	53	66.4	3.96
Bethel	18	88		35	57.3	0.63	8, 12	92	28	49	66.7	2.38
Cincinnati	19	88	2	42	61.6	0.94	.....	.....	.....	.....	.....	.....
College Hill	19	88	3, 4	40	59.4	0.88	25	95	18	52	71.8	5.25
Farmers' College	19	86	4	38	58.5	1.63	25	93	28	49	70.9	5.25
MICHIGAN.												
Grand Rapids	19	94	2	34	55.8	.....	24	90	18	48	66.8	.....
Monroe City	19	79	1	38	57.1	2.89	24	88	18	49	69.2	3.21
State Ag. College	19	80	1, 2	35	54.7	3.48	8, 12, 24	86	18	46	66.5	5.37
Homestead	19	89	1, 2	32	50.1	.....	8, 20	86	27	46	65.4	.....
Holland	19	85	2	32	51.8	2.50	8	94	18	48	66.3	4.89
Ontonagon	.....	.....	.....	.....	.....	.....	24	84	2	44	60.1	.....
Litchfield	.....	.....	.....	.....	.....	.....	24	91	.....	.....	.....	.....
Northport	.....	.....	.....	.....	.....	.....	24	88	1	42	59.8	.....
INDIANA.												
Aurora	19	94	4	36	.....	1.56	25	100	29	50	71.8	3.10
Vevay	18	98	3	44	64.4	1.50	12	99	29	50	77.8	5.28
Spiceland	19	91	2	39	59.3	1.70	25	96	18	51	71.3	4.20
Madison	19	84	.....	.....	.....	1.08	13, 25, 26	91	17	60	76.4	2.56
Columbia City	19	89	3	36	55.2	6.13	25	96	18, 28	49	68.1	3.06
Merom	19	90	.....	.....	.....	.....	25, 26	91	18	52	72.1	3.30
New Harmony	19	88	2	45	63.1	1.08	26	94	18	54	74.6	2.20
ILLINOIS.												
Chicago	19	98	2	34	54.4	.....	24	100	18	48	70.7	.....
Riley	19	93	2	34	52.2	.....	25	92	19	42	66.4	3.67
Golconda	26	94	3	40	68.7	3.30	8	95	19	44	76.2	2.60
Aurora	19	89	28	28	56.4	1.67	24	90	28	47	66.9	2.34
Sandwich	19	90	1, 2	38	57.9	3.19	25	95	28	49	68.4	5.29
Ottawa	19	93	1, 2, 3, 5	42	58.9	2.16	25	101	28	50	69.0	1.57
Winnebago	19	91	2	35	56.8	1.90	11, 24	90	16	50	68.2	4.45
Wyanet	18, 19	88	2	32	56.8	1.99	25	92	1	49	68.4	2.79
Tiskilwa	19	92	7	36	59.1	.....	25	99	16	50	69.3	.....
Elmira	19	90	2	38	60.2	1.63	25	92	1	51	69.8	2.69
Hennepin	19	90	2, 17	31	58.0	.....	25	92	1	43	67.0	.....
Peoria	19	88	2	39	60.7	2.57	24, 25	92	17, 18	54	70.9	2.62
Springfield	25	89	2	36	58.5	.....	25	94	2, 17, 18	50	69.8	.....
Loami	19	89	1	41	60.6	3.10	25	96	28	53	71.1	2.80
Dubois	18	88	2	31	57.7	2.25	26	88	29	40	64.1	8.49
Hoyleton	19	91	1, 2	45	60.4	1.35	25	98	29	48	73.0	5.75
Galesburg	19	85	2	35	58.0	1.24	24	88	16	51	68.7	0.83
Augusta	19	82	2	39	61.2	2.12	25	87	16	54	72.8	1.74
Manchester	19	89	1	44	63.6	4.95	25	93	16, 18	55	72.1	1.22
Mt. Sterling	18, 19	84	1	40	62.7	.....	24	93	16, 18	54	76.7	.....
Andalusia	19	86	2	35	56.7	.....	25	93	19	47	75.6	.....

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
WISCONSIN.		°		°	°	*In.*		°		°	°	*In.*
Manitowoc	12	74	1, 2	33	49.8	1.78	24	89	1	45	62.2	5.29
Milwaukee	9, 20	74	1	35	51.3	2.64	24	89	1	46	64.5	6.18
Ripon	19	86	2	35	55.3	.....	22	88	18	50	68.3	.....
Geneva	19	83	2	32	54.9	.....	11, 24	90	17, 18	50	67.7	.....
Delavan	19	87	1	35	54.6	2.05	11, 24	88	17	47	66.9	2.22
Waupacca	19	91	1	32	56.5	.....	24	90	11, 17	52	68.6	.....
Weyauwega	19	87	1, 2	38	55.0	1.00	24	92	27	50	68.4	.....
Embarrass	19	97	2	28	55.5	1.69	24	95	18	40	65.5	5.05
Rocky Run	19	91	2	34	56.0	3.70	.....	.....	.....	.....	.....	.....
Baraboo	.....	.....	.....	.....	.....	.....	24	90	16	50	69.0	5.50
Beloit	19	89	1, 2	38	57.4	0.55	.....	.....	.....	.....	.....	.....
Plymouth	19	86	2	31	51.6	2.20	24	90	16	45	65.6	6.00
MINNESOTA.												
Beaver Bay	17	75	1	32	48.3	1.02	25	87	11	40	58.2	3.34
Afton	19	93	1, 2	31	56.7	.....	3	89	16, 18	51	65.7	.....
St. Paul	19	86	1	31	54.8	0.39	20	84	16, 18	51	64.0	6.00
Minneapolis	19	87	1	30	58.7	0.65	20	88	17	51	67.2	7.28
Forest City	25	87	1, 3	32	59.0	0.00	.....	.....	.....	.....	.....	.....
Sibley	25	88	1	30	59.0	0.03	3, 25	87	16	49	66.4	2.44
New Ulm	18, 19, 25	85	1	34	61.4	0.35	25	92	28	51	69.6	3.75
IOWA.												
Clinton	18	94	2, 7	38	60.1	2.65	24	94	16, 17, 18, 29	50	69.3	4.80
Lyons	18, 19	90	2	28	61.1	1.87	22, 24	94	18	50	69.7	4.16
Davenport	19	85	16	33	57.8	4.80	25	89	18	52	66.4	9.77
Dubuque	19	89	1	41	59.0	1.91	24	90	1	52	68.8	4.33
Fort Madison	19	87	2	37	60.6	3.16	25	93	18	54	71.7	2.48
Monticello	19	90	1	33	56.9	3.16	24	87	16	48	69.7	4.00
Ceres	19	86	31	31	51.3	.....	24	92	16	44	67.5	.....
Manchester	19	88	2	35	56.3	1.13	24	87	16	48	63.0	4.67
Mount Vernon	19	91	2	31	58.2	.....	24	89	16	49	68.0	.....
Iowa City	25	84	2	35	59.2	1.59	.....	.....	.....	.....	.....	.....
Independence	18, 19	93	2	34	58.7	2.20	24	96	17	47	67.6	8.00
Waterloo	19	87	2	34	56.6	.....	24	94	28	48	65.3	.....
Osage	19	93	1	32	57.6	.....	24	93	17	51	67.8	.....
Iowa Falls	26	82	2	34	58.7	1.95	23, 24	86	18	34	64.7	7.16
Fontenelle	18, 19	88	1, 2	36	58.2	3.56	25	92	16	52	69.0	6.56
Harris Grove	18	90	2	33	58.2	0.12	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	23	90	15	50	67.9	3.81
MISSOURI.												
St. Louis Univer'y.	19	87	2	47	65.4	2.27	25	93	18	59	75.3	5.35
St. Louis	12, 18, 19	87	2	45	64.2	2.24	.....	.....	.....	.....	.....	.....
Allenton	19	88	3	40	59.9	3.04	7, 25	91	18, 19, 29	47	68.7	3.32
Athens	18	93	17	40	62.3	0.73	28	98	17, 30	58	74.5	2.50
Harrisonville	19	86	2	42	61.4	5.42	26	92	16	52	67.1	4.18
Union	12	89	2	44	63.4	2.50	25	93	17, 28	56	72.8	4.36

Table showing the range of the thermometer, &c., for May and June—Cont'd.

States and places.	MAY.						JUNE.					
	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain.
KANSAS.		°		°	°	*In.*		°		°	°	*In.*
Leavenworth	18, 25	90	14	40	60. 8	6. 04	21	96	29	47	69. 3	9. 25
Olathe	25	87	1, 2	42	61. 2	4. 30	25	91	16	51	70. 5	10. 60
Atchison	11, 17, 19	82	29	42	60. 4	.....	.....	.....	.....	.....	.....	.....
Agric. College	18	90	2, 28	45	61. 9	2. 83	24, 25	94	16	54	71. 8	3. 60
Burlington	25	90	2	41	62. 4	3. 14	25	94	28	54	71. 7	5. 46
Council Grove	18	88	2	41	59. 0	7. 60	24, 25	88	28	50	66. 6	11. 70
NEBRASKA.												
Elkhorn	18	93	1	37	61. 3	.....	24	93	5	52	68. 7	.....
Bellevue	18	90	1, 29	38	60. 7	1. 91	24	94	4, 6, 17	50	68. 3	5. 27
Glendale	19	92	1	36	60. 2	2. 85	7	95	16	46	68. 0	5. 93
UTAH TERRITORY.												
Great S. Lake City	17	82	8	40	58. 7	.....	17	88	7	45	65. 4	5. 34
Wauship	17	82	25	34	56. 3	.....	.....	.....	.....	.....	.....	.....
CALIFORNIA.												
Sacramento	16	91	5	45	63. 1	2. 25	.....	.....	.....	.....	.....	.....
Monterey	16	67	4, 5	47	52. 7	0. 80	.....	.....	.....	.....	.....	.....
Meadow Valley	15, 16	85	4	35	54. 0	2. 95	.....	.....	.....	.....	.....	.....
MONTANA TER'Y.												
Helena City	23	65	1, 2, 6	30	41. 3	4. 30	.....	.....	.....	.....	.....	.....
WASHINGTON TER.												
Neeah Bay	8	62	3	36	50. 1	6. 20	.....	.....	.....	.....	.....	.....

AVERAGES OF MAY AND JUNE.

Table showing the average temperature and fall of rain (in inches and tenths) for the months of May and June in each of the years named.

States, &c.	MAY.						JUNE.					
	Averages, 1864.		Averages, 1865.		Averages, 1866.		Averages, 1864.		Averages, 1865.		Averages, 1866.	
	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.	Mean temp.	Mean rain.
	Deg.	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*	*Deg.*	*In.*
Maine	53.4	3.47	54.0	5.71	52.3	4.70	64.4	1.09	66.6	2.00	63.1	4.16
New Hampshire	54.9	4.25	55.3	5.49	52.2	3.53	63.7	0.91	67.7	2.80	64.6	3.49
Vermont	56.3	3.95	51.3	4.71	49.3	2.59	64.4	1.29	66.7	2.71	65.1	4.03
Massachusetts	58.7	2.35	56.9	7.20	60.0	5.73	65.1	0.97	69.7	2.69	65.5	4.84
Rhode Island	.....	.....	.....	.....	54.4	5.50	65.6	1.22	.....	.....	66.0	4.13
Connecticut	60.2	3.28	58.4	6.99	55.0	5.60	67.1	2.06	71.2	3.36	66.3	4.16
New York	61.0	4.62	57.6	4.46	53.6	3.67	66.1	1.53	70.1	4.81	66.1	3.15
New Jersey	64.7	6.43	61.1	6.88	58.9	4.05	68.1	1.75	72.7	3.87	70.9	3.25
Pennsylvania	64.1	6.62	60.1	6.35	56.6	3.12	69.1	2.38	73.7	5.06	70.7	4.76
Delaware	.....	.....	62.5	5.80	60.6	.....	70.5	1.80	74.2	3.30	60.6	.....
Maryland	67.9	6.19	63.0	6.36	60.7	3.60	70.4	1.45	75.5	3.78	74.1	6.83
West Virginia	.....	.....	61.5	13.27	58.6	1.70	.....	.....	74.6	3.63	68.8	5.10
Georgia	.....	.....	.....	.....	63.6	6.87	.....	.....	.....	.....	69.6	4.89
Mississippi	.....	.....	70.3	0.35	70.9	9.85	.....	.....	78.5	3.14	76.0	5.65
Tennessee	.....	.....	.....	.....	62.9	2.11	.....	.....	.....	.....	71.6	2.84
Kentucky	63.5	4.18	63.5	7.46	61.8	1.69	72.6	3.09	75.8	4.25	72.5	5.15
Ohio	62.5	3.17	60.7	6.21	57.6	1.95	60.2	2.89	74.6	3.48	69.8	5.52
Michigan	58.6	2.71	57.8	1.60	53.9	2.96	67.8	4.25	71.3	2.74	64.9	4.49
Indiana	64.2	2.50	61.9	6.84	60.5	2.18	73.1	1.41	75.0	4.63	73.2	3.39
Illinois	63.4	1.79	60.6	1.67	59.0	2.38	72.1	2.29	68.7	4.50	70.2	3.43
Wisconsin	55.0	1.79	57.6	1.09	54.4	1.95	66.9	1.33	68.5	4.49	66.7	5.21
Minnesota	60.8	0.74	59.9	4.69	56.8	0.41	66.9	1.43	66.4	4.33	65.2	4.56
Iowa	61.3	3.02	60.1	1.82	58.0	2.34	72.0	4.29	70.6	6.98	67.8	5.43
Missouri	66.6	4.01	66.7	4.00	62.8	2.70	75.5	1.71	74.4	6.04	71.7	3.94
Kansas	65.4	1.52	66.3	4.80	61.0	4.78	76.9	2.19	75.2	6.77	70.0	8.12
Nebraska Territory	63.6	.....	62.7	2.20	60.7	2.38	74.3	2.86	72.7	5.07	68.3	5.60
Utah Territory	.....	.....	68.2	2.60	57.5	.....	.....	.....	77.9	3.51	65.4	4.34
California	.....	.....	65.0	0.31	56.6	2.00	71.5	0.09	64.7	0.08	.....	.....

NOTES OF THE WEATHER—MAY, 1866.

FROM THE SMITHSONIAN INSTITUTION.

Steuben, Maine.—May 12.—A very white frost. 31st.—It was so wet all this month that no planting of any account could be put in.

Lisbon, Maine.—May 15.—Ice this morning an eighth of an inch thick. Thermometer 32° at 7 a. m.

West Waterville, Maine.—May 14.—First blossoms of cherry and plum. 22d, first blossoms of apple. 31st, the mean temperature of the month has been lower than the average for May.

Standish, Maine.—May 4.—Farmers began to plant potatoes. 10th, dandelions and strawberries in blossom. 15th, ice a quarter of an inch thick on a pail of water this morning. 19th, cherries in full bloom. 23d, a few flakes of snow at 10.20 a. m., and again at 4 p. m.

Stratford, New Hampshire.—May 13.—Thunder-shower from southwest at 7 p. m. 14th, snow squalls all the forenoon; snowing again at 7 p. m. 15th, mountains white with snow this morning. Thermometer 26° at 5 a. m. Ice an eighth of an inch thick. 18th, first field strawberries in bloom. 21st, plum trees in bloom. 22d, snow squall from the northwest at 7.20 p. m. 23d, snow on the mountain tops all day.

Shelburne, New Hampshire.—May 12.—General time of forest trees leafing. 15th, ice in the creeks. 22d, snow squalls on the mountains in the afternoon.

Concord, New Hampshire.—The first ten days were extremely cold for the season; the whole month has been unusually cold and changeable.

Claremont, New Hampshire.—May 31.—The season is unusually late; vegetation advances very slowly. For about a fortnight of the last of April and the first of May everything seemed to stand still. April and the fore part of May were very dry, grass backward and slow in starting. In the latter part of May rain was abundant and the fields were growing green fast.

Lunenburg, Vermont.—May 31.—Maples are just putting out their leaves. The wild cherry tree is not yet full in blossom. There have been no freshets this spring and the meadows have not been flowed as usual.

Middleburg, Vermont.—May 13.—A violent thunder-storm and tornado at 5 p. m., destroying several buildings on high and exposed situations.

Barnet, Vermont.—May 13.—A great tornado about half past 4 p. m. The wind was in south, and for about an hour before there was every appearance of a heavy thunder-shower. The clouds came rolling up over the hills and were black as night. There was a little, but not severe, thunder and lightning. Soon the wind began to blow with great severity, taking large trees up by the roots, twisting off the tops of others, unroofing some barns, and blowing down others, as well as some houses. It totally demolished the toll bridge across the Connecticut river at this place. After the tornado passed there was quite a heavy shower of rain and a very little hail.

Brandon, Vermont.—May 13.—At 4½ p. m. a tornado suddenly broke upon the town from the southwest, followed by sharp zig-zag lightning and heavy thunder, with rain and hail. Fortunately it was of only a few minutes duration, or its consequences would have been most disastrous, for in the space of from three to five minutes it uprooted a large number of forest and fruit trees, unroofed a number of barns, and threw down a large amount of fencing. The most

violent part of the storm was confined to a space not exceeding one mile. 22d, spots on the Green mountains white with snow.

Randolph, Vermont.—May 8.—White frost; thermometer 29° at 5½ a. m.; smoky or dry mists in the valleys; earth dry for the season; streams low; land in good condition for planting; grass backward; sheep and young cattle out to pasture. 11th, white frost; plum trees in blossom. 12th and 13th, at 5½ p. m., dark clouds gathered in the west; wind southwest; in five minutes increased to a terrible gale; hailstones a quarter of an inch in diameter fell, covering the earth; rain followed, continuing moderately till 9 p. m.; trees were broken by the wind.

Richmond, Massachusetts.—May 2.—Snow on the mountain. 13th, heavy wind from the southwest through the day; thunder shower set in with hail and rain at 5.45 p. m. The hailstones were as large as buckshot, and covered the ground. 15th, plum trees in bloom. 21st, apple trees in bloom. 31st. The month was cool, and vegetation is late.

Worcester, Massachusetts.—May 10.—Apple trees in blossom. 16th, horse chestnut in blossom. 24th, white frost.

North Billerica, Massachusetts.—May 14.—Apple trees in blossom abundantly; streams low. 15th. Severe frost last night.

New Bedford, Massachusetts.—May 2.—Cherry trees begin to bloom. 20th, horse chestnut in warm exposure in bloom. 31st, forest trees generally in leaf.

Groton, Connecticut.—May 15.—Light frost this morning. 25th. Frost last night.

Little Genesee, New York.—Frost on eighteen mornings during the month; ice over an eighth of an inch thick on the 24th.

Rochester, New York.—May 20.—At 4 p. m. a thunder-storm came on from south and west, with violent wind; much rain, and most destructive hail over a narrow range of the city. It was the most severe hail-storm that has occurred here in many years.

Gouverneur, New York.—May 31.—The month has been cold and backward, and vegetation is some three weeks later than last season; garden vegetables are just coming up.

New York, N. Y.—May 13.—A violent storm came up suddenly at 5 p. m., accompanied with vivid lightning, but not much thunder. Hailstones fell thickly at first. The wind which preceded the storm did much damage.

Geneva, New York.—The weather was warmer on the 20th (85° at noon) than on any other day in May during the last fifteen years. But the average for the month has been 4.64° lower than the general average for May, and only six days, viz., the 10th, 11th, 12th, 18th, 19th, and 20th, have risen to the temperature due to the general average for the corresponding days.

Buffalo, New York.—The temperature of May was six degrees below the average of the eight years during which these observations have been taken. A part of the ice which was driven up the lake in the storm of April 23d, and returned three days later, lingered in the bay and across the entrance of the harbor until the 13th, offering, however, no serious impediment to navigation. There was frost on six mornings, the last of which was on the 17th, all harmless. The growth of every species of vegetation except grass has been slow, yet the opening of leaves and flowers is not much behind former years. Strawberries and cherries in blossom on the 11th; sugar maple and horse chestnut in leaf on the 18th, and forest trees generally on the 21st. Apple trees in blossom on the 22d. The temperature of the three spring months was 2¼° colder than the mean for eight years, and the precipitation of rain one inch more.

Moriches, New York.—May 13.—At a few minutes before 7 p. m. a dense black cloud formed along the western horizon and soon came up, the blackness measurably disappearing; some lightning and thunder accompanied it in its progress; rain began at 7; less than three-tenths of an inch fell; by 11½ p. m. the sky was entirely clear.

South Hartford, New York.—May 13.—At 4 p. m. a heavy and dark cloud formed in the south and west, accompanied with thunder. At 4.45 it was almost impossible to stand against the wind. At 5.20 the tornado came on, and for about five minutes unroofed houses, uprooted trees, scattered fences over large areas, and levelled forests by the acre, while the rain drenched the ground. No such hurricane is recollected here.

Garrison's, New York.—May 13.—A heavy thunder storm came from the west, accompanied with high wind and hail, and followed by frost the next morning.

South Trenton, New York.—May 2.—Two-tenths of an inch of snow fell. 10th, locust trees in bloom. 13th, cherry trees in bloom. 31st, grass is very backward for the time of year.

Germantown, New York.—On the 2d of May the Catskill mountains were covered with snow nearly to their base. On the afternoon of the 12th (13th ?) a severe hail-storm from the southwest passed over, accompanied with strong wind, but doing no damage to buildings. Tender plants and grapevines were considerably injured.

Theresa, New York.—May 13.—Distant thunder southwest from 2 to 3 p. m. 17th, water froze a sixteenth of an inch; cherry trees in bloom. 20th, a thunder-storm passed over at 7 p. m. from the west; high wind from the west for fifteen or twenty minutes; thunder distant; lightning zig-zag. 22d, occasional flakes of snow in the morning; apple trees in bloom. 31st, forest trees in leaf.

Depauville, New York.—The weather through the month of May was unusually cool owing to the hard winter frosts and their mellowing effects on the soil, and also to the dry weather during the first half of May. Farmers had a favorable time for ploughing and sowing, and never before got through their spring work so early or with more ease.

Nichols, New York.—May 13.—Shower at 2 p. m., with violent wind; a short distance from here, north-northwest and northeast, a number of houses were unroofed, and trees blown down. The storm came from the west; the clouds were of a dark purple color, and appeared to roll over and over very fast in the form of a whirlwind. 31st.—This has been the coldest May in some years; the mercury was below 32° at 5 a. m. on a number of mornings.

Palermo, New York.—This has been the coldest May in thirteen years.

Burlington, New Jersey.—May 13.—At half past four o'clock a thunder-shower passed over from northwest to southeast; the wind blew quite hard; rained about half an hour. 23d, heavy frost.

Newark, New Jersey.—The mean temperature of May was more than two degrees below the average of the last twenty-two years. There was no violent storm or tornado during the month. Lilacs put forth on the 10th, and the pyramidal clusters of the horse chestnuts opened about the 14th, a week later than last year. The mean temperature of the spring now closed was about the average of that season here.

Mount Holly, New Jersey.—May 13.—Thunder-storm from 4.45 p. m. to 5.30 p. m.; wind from the northwest. 23d, frost this morning. 27th, thunder-storm came up from northwest, (wind southwest;) about 9 p. m. began to rain; at 9½ p. m. rained very heavily; lightning diffuse, very brilliant, and almost constant.

Fallsington, Pennsylvania.—May 13.—Gale in the afternoon; light thunder-showers. 23d, frost. 31st.—The month has been cold and backward, and during the last three months, taken together, much less water fallen than is usual for the spring months.

Horsham, Pennsylvania.—May 9.—The weather for the past week has been mostly cool, with a great deal of wind. It is quite dry; apple trees are in full bloom, and there is a very fair promise of fruit. 23d, white frost last night.

Lewisburg, Pennsylvania.—May 13.—At 1½ p. m. a sudden and violent storm of wind came on, lasting half an hour, wind west; high wind all the afternoon.

15th, at 5 a. m., the thermometer stood at 32°; frost killed young shoots of grape-vines. 27th, a great hail-storm began at 4¼ p. m.; the wind at first was from the west; during the storm it changed to southwest, and then rapidly through east to north; when southwest it blew with a force of 9; within about an hour and a half it hailed twice, with a marked interval; the last time the hailstones averaged the size of hulled walnuts; many were much larger; one measured in longest diameter 2⅞ inches, and in shortest, 2¼ inches; many others were reported to be larger; at this point the storm travelled from southwest to northeast; great destruction was done; upwards of two inches of water fell in two and a half hours.

Grampian Hills, Pennsylvania.—May 13.—In the morning light clouds; barometer falling very fast; at 4.30 a. m. heavy storm of wind from northwest, with rain, throwing down timber and fences, and tearing down and unroofing several buildings; it lasted from five to ten minutes; at 2 p. m. drizzling rain; barometer rising, and thermometer falling. 14th, frost; thermometer 30° at 5 a. m. Apple and wild plum mostly in bloom. 23d, extremely dry; grass and grain backward; oaks beginning to show leaf; corn being planted.

Dyberry, Pennsylvania.—May 13.—Rain from 3 p. m. to 4 30, commencing with strong wind from southwest and some thunder; north and northwest of this place large quantities of timber were blown down. 25th, streams have been very low for some weeks. 27th, small streams well filled. 31st, the spring has been unusually cold and backward, fully three weeks later than usual.

North Whitehall, Pennsylvania.—May 3.—Plums in full bloom. 6th, peaches in full bloom, very sparingly. 12th, apples in full bloom. 13th, rain at 4 p. m., preceded by high wind.

Stevensville, Pennsylvania.—May 13.—A heavy blow passed here this afternoon; a dark cloud arose rapidly in the northwest, and reached here at about 2 p. m.; the wind was strong enough to blow over and twist off trees; two or three buildings were unroofed, and one or two moved from their foundations; the storm was accompanied with thunder and lightning and considerable rain.

Tioga, Pennsylvania.—May 4 to 7.—Heavy frost each day; on the 4th ice one quarter of an inch thick, and on the 5th an eighth of an inch. 8th, planted corn to-day; cold enough to wear mittens. 13th, very hard shower of rain and hail between 1 and 2 o'clock p. m., accompanied by very strong wind; many buildings were unroofed, fruit and other trees torn down, and fences scattered in all directions. 16th, apple trees in bloom. 23d, heavy frost this morning; ground frozen; ice a sixteenth of an inch thick; a little snow about 9 a. m. 31st, this has been the coldest and dryest May in twelve years.

New Castle, Pennsylvania.—May 13.—Mercury at 9 a. m. fell from 74° to 50° in twenty minutes; a hail-storm passed west and north a few miles from here. 14th and 15th, very heavy white frost; ice formed an eighth of an inch thick; nothing injured on the high elevation on which the observer lives except a few early strawberry blossoms, but on the next level below grapes were killed.

St. Mary's City, Maryland.—May 13.—About 5 o'clock this afternoon a violent tornado, accompanied by thunder and lightning and followed by rain, came sweeping from the west. In its course across St. Mary's river it described an irregular curve. The line of its greatest intensity was not greater than a few rods in width; in this space it appeared to revolve on an axis perpendicular to its course, and raised the water as it advanced in large masses. In one place it remained stationary for a few seconds, and elevated a column of water some six or eight feet high, exhibiting, in a very lucid manner, the law of the formation of water-spouts. When it emerged on the land it carried away trees and fences in its course, continuing in the same curve, whose radius could not have been more than two miles. Immediately afterwards the wind shifted to the northeast.

Woodlawn, Maryland.—The month has been very cold and backward for

vegetation; garden plants have been blighted in exposed situations, and the corn has the blades deadened and yellow; hoar-frost has been seen on seven mornings, and thin plates of ice on six mornings, the last on the 24th.

Wytheville, Virginia.—May 1.—Lowest barometer since November, 1865. 13th, shower at 1 p. m. 22d, first ripe strawberries. 28th, violent gale during the night; the wind has been high for several days.

Grenada, Mississippi.—May 31.—This month has been remarkably wet and rather cool; crops of corn and cotton are backward, and in bad condition; appearances at present are unfavorable for anything like an average crop; wheat is now being harvested; it has suffered much from rust; not over half a crop.

Chapel Hill, Texas.—May 1.—Norther at 8 a. m. 3d, norther at 10 p. m. 23d, diffused lightning in the northwest at 9 p. m.; the lightning was from a distant cloud seen through a rift in the nearer cloud. 24th, at 3 a. m a norther, with rain, reached here from the cloud in which the excessive lightning of last night proceeded; it still contained a large amount of electricity. 28th, norther at 4.30 p. m.; it was preceded by intense heat and calming down of wind; a heavy nimbus cloud north from 2 to 4 p. m. contained much electricity, given forth in a zigzag lightning.

Chilesburg, Kentucky.—May 13.—A sprinkle of rain this morning for near an hour. 14th, frost this morning; thermometer 34° before sunrise. 22d, frost this morning; dock, plantain, clover, and potato leaves frozen stiff; strawberries ripe; some of the grapes in full bloom, nearly all just ready to open. 30th, frost this morning; thermometer 38°; carried lower and laid on the ground it sunk to 34° after sunrise; leaves stiff frozen this morning.

Kelley's Island, Ohio.—May 9.—Cherries in bloom. 12th, apple trees just coming in bloom. 13th, rained moderately from 7 p. m. yesterday to 10 this morning. 14th, hoar-frost in some localities in the interior; none near the lake shore. 22d, grapes in leaf, just fairly open.

Kingston, Ohio.—The last frost was on the 23d, the thermometer stood at 37° at 5¼ a. m.

Westerville, Ohio.—May has been unusually dry and cold; there have been from twelve to fifteen frosts; vegetation has been retarded in consequence.

Milnersville, Ohio.—The frosts of the nights of the 22d to the 25th did considerable damage to early potatoes and to buds and blossoms of grape-vines.

Toledo, Ohio.—May 27.—The barometer was lower to day than it has ever before been observed in May; it was attended with a great fall of rain and considerable wind.

Lansing, Michigan.—May 1.—At 8.15 a. m. a snow-storm began, (wind northeast,) and lasted till 5 p. m.; much of the snow melted as it fell, but enough remained to form a covering of four inches on a level on bodies removed from immediate contact with the soil, as roofs of sheds, &c. The last of the snow, in secluded places, did not disappear till the forenoon of the 3d.

Holland, Michigan.—May 1.—Snow-storm in the afternoon. 31st.—The season is backward; there was frost on ten mornings during the month.

Homestead, Michigan.—May 24.—There have been several hard frosts in nights past, and young leaves of forest trees look colored and bitten. 31st, hard freeze last night. The month has been cold, with few showers and much north and northwest wind.

Vevay, Indiana.—Heavy frosts in the nights of the 4th, 5th, 14th, 15th, and 29th. On the 13th there was a shower of rain from 5 to 6.30 a. m., accompanied with high wind. 31st.—The nights during the month, with a few exceptions, have been bright and clear.

Galesburg, Illinois.—May 31.—The month has been cold and vegetation is backward; trees that were in full bloom give signs of but little fruit.

Augusta, Illinois.—May 1.—Apple trees in bloom. 5th, wild crab in blos-

som. 11th, Osage orange leafing out. 29th, red and white clover in blossom. 30th, garden strawberries begin to be ripe.

Winnebago, Illinois.—May 23.—Thermometer at sunrise 33°. The frost of this morning was very injurious to pears, early apples, cherries, and plums; potatoes, corn, and tender vegetables were killed in many localities.

Riley, Illinois.—May 7.—Hard frost; ground frozen half an inch. 11th, about half an hour after sundown, a swarm of beetles came from the west; for about twenty minutes, with a roaring, rushing sound like the approach of a heavy wind, they could be heard in all directions, and were of a dark-red brown color, about seven-eighths of an inch or an inch long. In some districts west they came from the north the evening previous so thick, that if doors or windows were open they literally filled the house like the locusts and frogs of Egypt.

Golconda, Illinois.—May 15.—First strawberries in market, out-of-door growth. 31st.—The month has been very cool with frequent showers; all the crops are doing finely; so far, the prospects are the best for several years.

Aurora, Illinois.—The observer has not known so cold and backward a May during the eighteen years that he has resided here. The general impression among farmers is, that their crops will be far below the average.

Dubois, Illinois.—May 26.—At 7 a. m. a dense fog. A few minutes before midnight a terrific thunder-storm came up with a violent gale, the wind blowing down fences, trees, &c.

Wyanet, Illinois.—May 17.—Heavy frost, and ice as thick as window-glass; killed large quantities of fruit; fruit near ponds not hurt so much.

Elmira, Illinois.—May 2.—Thermometer 29° at sunrise; ice a sixteenth of an inch thick. 4th, considerable frost; thermometer 34° at 5.10 a. m. 6th, 7th, 14th, slight frosts. 17th, heavy frost; thin ice formed; thermometer 31° at sunrise.

Allenton, Missouri.—May 29.—Thermometer 35½° at 5 a. m.; white frost seen in the neighborhood.

St. Louis, Missouri.—Only two thunder-storms occurred during the month—on the 12th and 26th. The quantity of rain was less than ever before observed in May. The temperature was two degrees less than the average of thirty-one years. The river was highest in the beginning of the month, nearly twenty-four and a half feet above low water, gradually falling to fourteen and a half at the end of the month.

Milwaukee, Wisconsin.—May 17.—Ice this morning.

Delavan, Wisconsin.—May 29.—Frost in the bottoms at sunrise.

Plymouth, Wisconsin.—May 31.—The month has been dry and cold; vegetation is about ten days behind the average of the four preceding years. Early before sunrise this morning the thermometer showed only 29°.

Embarrass, Wisconsin.—May 1.—Snow from 4 a. m. to 2.30 p. m.; depth four inches. 6th and 7th, frost and ice formed. 13th, plum trees commencing to bloom. 14th, hard frost this morning. 22d, 23d, and 24th, ice a sixteenth of an inch thick in water-trough. 31st.—This has been a cold, dry month. the spring is very backward. Winter wheat was killed in some places.

Waupaca, Wisconsin.—May 1.—Four inches of snow fell this forenoon. 31st, quite a frost this morning, and considerable ice. May has been cold and dry; a few extremely warm days.

Geneva, Wisconsin.—May 1.—Snow, rain, and thunder. 19th.—Lilacs in bloom; apple trees begin to blossom. 31st.—The month has been cold and dry; vegetation is backward.

Baraboo, Wisconsin.—May 1.—Tulips, crocuses, and snow-drops in blossom. 13th, crab-apple, plum, apple, and cherry trees in blossom. 17th, lilacs and flowering almond in blossom. 27th, 28th.—Quite a drought till this date; ground very dry to a depth of eight or ten inches. A fair, soaking rain now came, wet-

ting cultivated ground quite deep, not running off, but sinking down into the earth, doing an immense amount of good to crops which had started to grow.

Afton, Minnesota.—May 14.—Red currants and gooseberries in bloom. 17th, wild plum in full bloom. 19th, very heavy gale of wind from the northwest, commencing about 4 p. m., and ending with a thunder-storm at 7 p. m.

Minneapolis, Minnesota.—May 19.—Thermometer 90° at 12 m., and 57° at 7 p. m.; the wind changing from southwest to northwest. May 23, lilac, yellow currant, and wild columbine in flower.

Ceres, Iowa.—May 15.—Cherry and apple trees in full bloom. 23d, heavy white frost this morning. 31st.—The month has been very changeable and generally cool.

Lyons, Iowa.—May 17.—Heavy frost, doing much damage to grapes and other fruit. 19th, a hard wind-storm occurred at 11 p. m., continuing for about twenty minutes.

Iowa Falls, Iowa.—May 1.—Snow squalls from 6 a. m. to 3 p. m. 26th, the weather has been very dry, and corn has not come up well.

Clinton, Iowa.—May 2.—The Mississippi river is eighteen to twenty feet above low-water mark, and within eight inches of high-water mark. 3d, river at a stand. 5th, river falling.

Manchester, Iowa.—May 10.—Gooseberry bushes in full bloom, and plum trees beginning to blossom. Cattle have got their living for a week in the prairie. 14th, hard frost this morning. 18th, apple trees in full bloom. 23d, crab-apple trees in full bloom. The ground is getting quite dry.

Waterloo, Iowa.—May 14.—Last frost in this month. 31st has been for the most part cool and dry; corn, and especially small seed, is very backward and irregular in coming up.

Monticello, Iowa.—May 14.—A severe frost this morning; fruit buds not advanced far enough to be injured by it. 17th, a light frost, but no injury to vegetation. 25th, the weather is so dry that crops begin to suffer.

Fort Madison, Iowa.—May 15.—At 5 p. m. corn-crib struck by lightning and roof set on fire, which was soon extinguished. 18th, sorghum and early corn up. 28th, ground too wet to plough.

Dubuque, Iowa.—May 1.—The Mississippi river at a stand from the present rise, reaching within six inches of the high-water mark of June 14, 1859, which was the highest water since the observer has been keeping a record. 2d, 4th, 7th, hoar frosts. 9th, cherry trees in blossom.

Iowa City, Iowa.—May 2.—Hard frost; vegetation being late, was uninjured. 17th, 19th, light frost, doing no damage.

Leavenworth, Kansas.—May 31.—This has been an unusually wet, cloudy, and cold month for this climate, being nearly nine degrees below the average temperature, and over one inch above the average amount of rain. Lighting and thunder were frequent, and during a storm on the evening of the 19th four persons were killed by the lightning, while camped under a tree between the city and fort.

Atchison, Kansas.—May 19.—Heavy thunder-storm accompanied with high wind from the northwest, continuing from 6 to 7 o'clock p. m. 29th, light frost in the low grounds this morning.

Manhattan, Kansas.—May 11.—From 7½ to 9½ p. m., lightning came from a distant cloud in the northeast about fifteen degrees long and ten degrees high. The cloud remained nearly stationery for two hours, and no other portion of the sky was obscured. No thunder was heard. For near half an hour the flashes averaged about fifty to a minute.

Burlington, Kansas.—May 16.—Wild grapes begin to bloom. 27th, Clinton and Catawba vines begin blooming. 29th, considerable frost away from the river. Thermometer at sunrise 39°; on the ground, in vicinity of the frost, on old hay, 34°. Tender vegetables killed in exposed places, at least fifteen days

later than ever known before in this section of Kansas. 31st, river highest to-day for the month.

Glendale, Nebraska.—May 10.—Currants in bloom. 11th, apple trees and choke-cherry in bloom. 13th, themometer at 5 a. m., 32°. The freeze did but little damage. 21st, honeysuckle in bloom. 28th, common locust in bloom.

Elkhorn City, Nebraska.—May 3.—Maple leafing. 13th, wild strawberry blooming. 14th, wild cherry blooming. Trees generally in leaf. 31st, there was some drought about the middle of the month, but rain came in season to bring up the planted corn.

Temperature of spring, 1866, 47.15°; temperature of spring for eight years 48.24°; temperature of May, eight years, 63.02°.

NOTES OF THE WEATHER—JUNE, 1866.

Standish, Maine.—June 1.—Heavy frost last night, killing in low places.

Gardiner, Maine.—Mean temperature of June 2.14° lower than the average of thirty years. Amount of rain 0.22 inch above the average of twenty-eight years.

Steuben, Maine.—June 1.—Ice this morning as thick as the glass on the roof of the green-house. 2d, the ground was white with frost and the intervale as white as winter. 10th, smart frost this morning.

Stratford, New Hampshire.—June 1.—Hard frost this morning; ice in a tub near the house one-sixteenth of an inch thick. 2d, first apple blossoms.

Little Genesee, New York.—June 1.—Frost. 29th, frost in some of the neighboring towns; no harm.

South Hartford, New York.—The mean temperature for June was unusually ow. Many thunder-showers occurred during the month.

Nichols, New York.—June 1.—Large white frost this morning, but it did no damage.

Palermo, New York.—This has been the coldest June since 1859.

Rochester, New York.—The temperature of the first half of June exceeded the average for thirty years; but the last half was below the average, so that the whole month exceeded the average seven-tenths of a degree.

Geneva, New York.—The month of June has been about one-fourth of a degree warmer than the general average for this place. There has been 1.321 inches of rain more than the average, and so distributed as to be most favorable to the growth of vegetation.

Buffalo, New York.—The mean temperature of June was one degree lower than the average for eight years. The amount of rain did not vary much from the general average for the same period, and the showers were well distributed through the month. The terrific storm that burst upon the city at 4 p. m. of the 25th was one of the most destructive that ever visited this part of the State. Two buildings were struck by lightning during the thunder-storm on the morning of the 26th.

Newark, New Jersey.—The mean temperature of June was about three-tenths of a degree below the average for the month. The amount of rain was about eight-tenths of an inch below the average. There was comparatively little thunder and lightning, and there was no storm of any severity.

New Castle, Pennsylvania.—The ground was white with snow on the night of the 18th, about midnight. There were frequent warm showers during the entire month.

Tioga, Pennsylvania.—The whole month of June was very favorable for agricultural purposes.

Pennsville, Pennsylvania.—June was throughout very favorable to vegetation, measurably making up for the deficiencies of May, moderately warm and moist, yet no very heavy rains or floods or storms of wind, thunder or lightning.

Grenada, Mississippi.—Highest range of thermometer at sunrise, 75° on the 14th; lowest, 52° on the 30th. This is the coolest weather for the season by 4° that has been in this place in ten years past.

Norwalk, Ohio.—There was a very cold rain on the 17th and 18th of June. Many sheep perished in northern Ohio. It is estimated that in Huron county alone a loss of fifty thousand dollars was sustained. The fall of rain has been greater than in any month heretofore recorded by the observer.

Kelley's Island, Ohio.—The storm of the 18th and 19th of June was one of the most severe ever known at this season of the year. The destruction of life and property on the lake was very great. It is estimated that more than ten thousand sheep perished in Erie county alone from the effect of the cold and wet, immediately after shearing.

New Lisbon, Ohio.—June 29.—Some frost this morning.

Urbana, Ohio.—June 29.—Thermometer at sunrise 42°. There was frost in several localities about Urbana, but the observer could find no evidence of its effects on the most tender vegetation in his place.

New Harmony, Indiana.—The rain fall at this station for the months of April, May, and June is only 5.54 inches, the lowest amount that has fallen during the last fourteen years for the same period.

Sandwich, Illinois.—The average temperature of June was lower than that of the same month for nine years.

Riley, Illinois.—The mean temperature of this month was 1.78° below the average of June for eleven years, and the amount of rain about one inch below the mean for the same time; yet on account of the rain being divided so equally through the month the supply has been abundant. Every rain during the month (with but one exception) was accompanied with severe winds, sometimes approaching to a hurricane, which has packed the ground very hard and crusty.

Dubois, Illinois.—A greater amount of rain fell during June than in the same month for sixteen years.

Galesburg, Illinois.—June has been dry, and vegetation is backward, especially corn.

Manitowoc, Wisconsin.—June 1.—Hoar-frost; thermometer 35° at 5 a. m.

Embarrass, Wisconsin.—June 17.—Very slight frost this morning, nipping squash and other vines in a neighbor's field. 21, shower at midnight, with heavy thunder and sharp lightning; heavy wind, taking down very many trees, three miles north and west from here.

Plymouth, Wisconsin.—June 8.—From $4\frac{1}{4}$ to $6\frac{3}{4}$ p. m. a severe thunder-storm prevailed from west and southwest to northwest and north, attended by a hurricane-like wind from southwest to west, and some fall of hail.

Minneapolis, Minnesota.—June 25.—Tornado from 8.15 to 8.45 p. m. The entire roofs of large stone buildings, as livery stables, car factories, &c., were carried off, and the fronts of small buildings torn out.

Saint Paul, Minnesota.—The temperature of June was 1.85 degree below, and the amount of rain 1.94 inch above, the mean of eight years.

Afton, Minnesota.—June 25.—A heavy gale of wind, rain, and hail from 8.25 to 8.50 p. m., destroying an immense amount of property. The wind had been blowing gently from the southwest; about an hour before the storm the lightning was extremely vivid, and dark cumuli began to appear in the northwest; in a moment the wind changed into the west-northwest and came with the force of a tornado, sweeping everything before it.

Guttenberg, Iowa.—June 11.—Tornado at fifteen minutes to 2 o'clock; trees, fences, &c., destroyed.

Clinton, Iowa.—June was rather wet; there were a few days of very hot weather, but on the whole the month was cool.

Manchester, Iowa.—June 18.—Quite a frost this morning. 19, frost again; in some low places it is said the corn is cut down.

Leavenworth, Kansas.—The mean temperature of the month was 4.1° colder than the average of June for five years; and the amount of rain was 4.15 inches above the average for the same period. The 17th was the only clear day during the month, which was most remarkable for this country.

Burlington, Kansas.—For farming purposes the month of June was entirely too wet, there being fourteen days on which rain fell, though very light on some days.

Richland, Nebraska.—The month has been the coldest June, but one, recorded by the observer. The first half was wet, the last half not deficient in rain.